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The Economic System of Sierra Leone

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The Economic System of Sierra Leone

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To Margaret

Preface

This work, which grew out of a dissertation submitted in partial fulfilment of the requirements for the Doctor of Philosophy degree at Duke University, is a direct outcome of the author's participation in Dr. C. B. Hoover's seminars in economic systems and economic functions of the state. The idea and the inspiration to examine the economic functioning of a specific state were born in these most challenging seminars; the approach to the subject matter in this work reflects their continuing influence.

The following analysis of the economic system of Sierra Leone is limited in many respects because of the large number of gaps in the statistical data and the quantitative information relating to Sierra Leone. These gaps, however, forced the writer's attention toward areas of inquiry which might have been overlooked had a more quantitative approach been possible. While it is difficult to weigh the merits and demerits of alternative approaches to given subject matter, it is my opinion that the method of analysis utilized gives insights into the operation of one economy that might not be gained in a more formal quantitative exposition. Nevertheless, quantitative material was sorely missed in several instances where specific hypotheses could not be empirically tested. More specific detail of the methods used, the scope, and the purpose of this work are given in the Introduction.

Acknowledgment must be extended to those who have aided the writing of this book. I am deeply grateful to Dr. Hoover, who supervised the original dissertation, for his numerous comments and suggestions on various portions of this work, for his moral support and encouragement, and for his help in obtaining funds for my research in Sierra Leone. His patience, willingness, and promptness in reading and rereading both the original dissertation and the present manuscript were invaluable aids. Thanks are also due to Dr. Joseph J. Spengler for his many pertinent comments and

observations and to Mr. Robert Clifford, the United Nations advisor to the government of Sierra Leone in 1965–66. Mr. Clifford opened the Development Office of Sierra Leone for my use, supplied me with many documents and statistics that otherwise would not have been available, and gained permission from the Sierra Leonean government for me to attend various official meetings of the Development Office. I am also grateful to the following people who permitted me to interview them while I was in Sierra Leone: Mr. Jacob Davis, chief agriculturalist of the Sierra Leone Department of Agriculture; Mr. G. M. McDonald, director of research, Bank of Sierra Leone; Mr. Hugo Godbeer, co-ordinator of industrial development, Ministry of Trade and Industry; Mr. S. A. Jabati, managing director of the Sierra Leone Produce Marketing Board; Dr. David Carney, former economic advisor to the Sierra Leone government; Mr. C. G. White, manager of the Rice Department; Messrs. J. H. Davies and J. Dixon-Fyle, professors of economics at Fourah Bay College, the University College of Sierra Leone; and the staff members of the United States Agency for International Development in Sierra Leone. In addition, I would like to thank Gil Rutman, Don Pursell, Pat Gormely, and the other graduate students in economics at Duke University for listening to my ideas, for discussing both major and minor points, and for reading and criticizing various sections of this work. The usual disclaimer that I alone am responsible for all remaining errors must, however, be issued. I am further indebted to Duke University for financing my travel to and stay in Sierra Leone, and to Fourah Bay College, the University College of Sierra Leone, for providing living accommodations during my stay in Sierra Leone and for permitting the use of its library facilities, especially the Sierra Leone collection. I am also grateful to Barclays Bank D.C.O. and Geographia Limited, of London, for their permission to reproduce the map of Sierra Leone.

Finally, I want to thank my wife Margaret, who was deprived of her normal activities while typing and retyping the original dissertation, and the Federal Reserve Bank of Dallas for permitting Jan Ross, Linda Guinn, and Bonnie Lloyd to type the final manuscript.

R. G. S.

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Courtesy Barclays Bank D.C.O.

Introduction

In the post-World War II period, an increasing number of countries have turned to some form of state-directed economic system in order to promote economic growth and to achieve various social and political goals. The reorganization of the economic institutions of these economies has taken place despite the impressive growth records of the Western "mixed-enterprise" economies. Capitalism and its institutions have been rejected "out of hand" in Guinea; and Tanzania, Senegal, Ghana, Kenya, Dahomey, Mali, Algeria, Tunisia, and Uganda are rapidly extending the role of the government into all spheres of economic activity in hope of ameliorating living conditions and promoting rapid, sustained economic growth. Through the efforts of the leaders of these states, a new, amorphous economic system has evolved—"African Socialism."[1]

With the possible exception of Nigeria, the majority of the research done on Africa by social scientists since World War II has concentrated on the development efforts and economic systems of the above-mentioned states. The present study, however, is devoted to one of the more obscure West African nations, Sierra Leone, which has not modified its traditional or inherited capitalistic institutions to any marked degree when compared with other tropical African states. Sierra Leone has not nationalized a major industry; private enterprise of both domestic and foreign origin (with certain exceptions noted in Chapter 5) is encouraged; the prices of most goods and services are still market determined; and no active attempt is being made to equalize income distribution—only equality of opportunity.

1. See W. H. Friedland, ed., *African Socialism* (Stanford, Calif.: Stanford University Press, 1964).

The purpose of the present study is to analyze the economic system through a time-series analysis (primarily 1950–63) of its major structural components—agriculture, mining, manufacturing, and foreign trade; to examine the changing role of government within each of these sectors; and to look into governmental attempts to co-ordinate and promote the economic development of the country.

Subsumed within the analysis of the individual sectors, various hypotheses is examined. In the agricultural section of this book (Chapters 2 and 3), an attempt will be made to substantiate three major hypotheses. The first of these hypotheses stems from T. W. Schultz's recently developed thesis that traditional agriculture is in general an efficient, well-organized sector which is in long-run equilibrium (depending upon the state of the arts, long-run equilibrium may be established at either a high- or a low-output level in the traditional sector). While insufficient data exist to test Schultz's hypothesis empirically by calculating or estimating the price of an increase in the permanent income stream of specific farmers or groups of farmers, qualitative information is marshaled which indicates the validity of Schultz's thesis. At the same time, an attempt is made to evaluate critically Montague Yudelman's complementary hypothesis concerning the economic rationality of "shifting cultivation" in the Sierra Leone context. Yudelman's hypothesis, briefly stated, is that the tropical soils of Africa are, in general, not well suited for intensive and continuous cultivation. Thus, Yudelman postulates that, given a plentiful supply of land relative to labor and capital, such as has existed in most of Africa until recent years, an ecological balance can and will be achieved. The third "hypothesis" involves the allocative effects of the operations of the Sierra Leone Produce Marketing Board. In this connection, an examination is made of the price responsiveness of the Sierra Leonean farmers. If a positive price elasticity of supply for the various agricultural products exists and if the board pegs its prices lower than the prices that would have been established under a free market system, it will be contended that the actions of the board have tended to inhibit the growth of the agricultural sector, assuming

the returns on the funds as used by the board are less than the returns obtainable by individual farmers.

In the chapter dealing with mining (Chapter 4), the shift in the structure of mining output is examined in terms of shifts within the mining sector and between mining and other sectors. An attempt is also made to assess the economic consequences of the Mining Wages Board in terms of its employment effects. In the chapter relating to manufacturing (Chapter 5), the analysis will focus primarily on various governmental attempts to promote industrialization. The final major chapter of this book (Chapter 6) is a detailed analysis of the governmental efforts to mobilize resources for development through planning and monetary and fiscal policy.[2]

It is not within the scope of this work to deal with the current or past political situation of Sierra Leone or its political parties and social institutions except as they may impinge upon a particular segment of the analysis.[3] Nor is an attempt made to formulate policy recommendations, although various policy recommendations are implicit in almost every section of this book. Since social and political phenomena condition the working out of economic phenomena once an exogenous or indogenous shock occurs within the system, the removal of these topics may result in certain distortions. The author, however, lacks the competence to treat these matters adequately; they are better left to other specialists.

Finally, data problems, which are encountered by most researchers working on topics related to tropical Africa, must be mentioned. Data relating to the import and export sectors are generally adequate for most of the analyst's needs; however,

2. Because of the rather primitive nature of the planning organization in Sierra Leone (in 1965 there were only two working economists on the staff of the Department of Agriculture, and little co-ordination between the planning office and other governmental offices and agencies existed), the emphasis of Chapter 6 will be on past and present attempts to mobilize resources rather than on the organizational structure per se.

3. See, for example, Great Britain, Central Office of Information, Reference Division, *Sierra Leone: The Making of a Nation* (London: H.M. Stationery Office, 1960); A. P. Kup, *A History of Sierra Leone 1400–1787* (Cambridge: Cambridge University Press, 1962); Christopher Fyfe, *A History of Sierra Leone* (London: Oxford University Press, 1962); and Martin Kilson, "Sierra Leone," in James S. Coleman and Carl G. Rosberg, Jr., eds., *Political Parties and National Integration in Tropical Africa* (Berkeley and Los Angeles: University of California Press, 1964), pp. 90–131.

much, if not most, of the basic information relating to the domestic economy is lacking. For example, only one comprehensive census of population has ever been taken in Sierra Leone, and the statistics concerning the occupational and industrial employment of the economically active population are not yet available. In addition, estimates of domestic food production and consumption are highly unreliable, and virtually no information exists concerning the prices of these transactions. As a result, previous estimates of gross domestic product or gross national product are highly unsatisfactory. All past estimates of these aggregative measures begin with the assumption that annual per capita private consumption is £10, £12, or some other arbitrarily selected number, and that number is multiplied by a population estimate.[4] Thus, Table 1, prepared by the Ministry of Development, contains three

Table 1. ***Balance of resources in 1961 (£ millions)***

	Alternative		
	One	Two	Three
Gross domestic product	50	75	100
Imports (retained only)	28	28	28
Total supply of resources	78	103	128
Public investment	4	4	4
Public consumption	12	12	12
Private investment	(4)	(6)	(8)
Private consumption	(33)	(56)	(79)
Exports	25	25	25
Total use of resources	76	103	128

Source: Sierra Leone, Ministry of Development.

alternative estimates of Sierra Leone's 1961 gross domestic product. These estimates range from a low of £50 million to a high of £100 million. Inspection of the table, however, reveals that the differences between estimates are due almost entirely to differences in estimates of private consumption. Hence, until reliable estimates of private consumption are available, estimates of gross

4. Prior to 1964, the legal currency of Sierra Leone was the West African pound (equivalent to about $2.80). Since 1964, Sierra Leone has adopted its own national currency, the Leone (Le), which is equivalent to approxiately $1.40.

domestic product must remain highly tentative. But even if better estimates of gross domestic product by expenditure were available, they would be of relatively little use, for estimates are needed according to the value added by the various sectors of the economy. Without such estimates, it is impossible to analyze structural changes in the economy over periods of time by use of social-accounting data. Instead, structural changes must be examined through the use of such crude and unreliable measures as employment or estimated tonnage of output. Each alternative measure, of course, has serious defects. Other data limitations is mentioned when necessary.

• 1 •

The Physical and Demographic Characteristics of Sierra Leone

The functioning and development of an economic system depend in large part on the availability and use of the physical and population resources of that system. The growth and development of physical and human resources are not independent of each other, however, as variations in one of the variables may induce corresponding changes in the other. This chapter does not seek to separate or to specify this interdependent network, but it seeks to describe generally the availability and use of these resources in order to gain insight into the structure and functioning of the economic system to be examined more fully in later chapters. The first section of this chapter presents a general survey of the geography, geology, and transportation system of Sierra Leone; the second section treats human resources.

A. Physical Characteristics

Sierra Leone is a roughly circular West African country with a land area of approximately 27,925 square miles lying between 6° 55′ and 10° north latitude and 10° 16′ and 13° 18′ west longitude. The country is bounded on the north and west by Guinea and on the south by Liberia. In common with most West African countries, Sierra Leone lies within the zone traversed seasonally by the intertropical front associated with the equatorial low pressure belt.[1] Correspondingly, the climate is continuously warm to

1. P. K. Michell, "The Climate of Sierra Leone," *Bulletin: The Journal of the Sierra Leone Geographical Association*, No. 5 (July, 1962), pp. 2–5; H. R. Jarrett, "Weather in Sierra Leone," *Geographical Journal*, CXX (March, 1954), 124–127. For a more general discussion of West African climate, geography, and geology, see R. J. Harrison Church, *West Africa* (London: Longmans, Green, 1957).

hot, with well-defined wet and dry seasons controlling much of the economic activity of the country, especially the mining activities of the licensed diamond diggers. The dry season extends from December to April and contains two main weather-types: (1) The Harmattan period of clear skies with dry southwesterly winds from the Sahara provides high daytime and low nighttime temperatures. During the Harmattan, the sky is usually hazy from the dust particles picked up in the Sahara. This type of weather normally occurs for only a few days at a time from December to February. (2) The dry southwest regime is a time of high humidity, hot and oppressive days, and warm nights. Heavy morning fog and nighttime dew are characteristic.

The rainy season normally extends from June to October, and the dry and the rainy seasons are linked by periods of thunder squalls. Rains during this period are normally in the late afternoon or early evening, and the winds come from the southwest. Weather in the rainy season is typically overcast and humid; rains are frequent, heavy, and prolonged; clearances seldom exceed one day. The amount of rain per year varies considerably according to geographical regions, as the following official statistics evidence: the ten-year mean rainfall at Hill Station on the western side of the former Colony (the present-day Western Area) is 177 inches; the corresponding average for Yengema in the eastern uplands is 119 inches; and for Musaia in the far north, 79 inches (see map on page 2).[2] The mean daily temperature is fairly constant throughout the year, varying between 78° and 84° F., and the mean sunshine per day shows a regular succession from a minimum of roughly two hours per day in August to a maximum of a little more than eight hours per day in January and February.[3]

Topographically, Sierra Leone may be divided into two major parts of nearly equal land area by a line running NNW from Zimi in Pujehun District to Kamakwie in Bombali District.[4] To the

2. Sierra Leone, Department of Agriculture, *Report of the Department of Agriculture, 1960* (Freetown: Government Printer, 1962).

3. Church, *West Africa*, p. 36.

4. The topography of Sierra Leone is discussed more fully in J. D. Pollett, "The Geology and Mineral Resources of Sierra Leone," *Colonial Geology and Mineral Resources*, II, No. 1 (1951), 3–28, and F. Dixey, "The Physiology of Sierra Leone," *Geographical Journal*, LX (July, 1922), 41–65.

south and west of this line, the land consists of a low-lying coastal plain which reaches an altitude of about 750 feet above sea level. The land is generally gently undulating in the coastal plain with the undulations increasing in frequency and intensity near the rivers. In the northwestern region of the coastal plain the land is quite flat, and large portions of the plain are flooded during the rainy period; certain sections remain swampy or marshy throughout the year. It is in the salt-free regions of these annually flooded plains that the government has sought to promote swamp rice production in an effort to conserve the soil. Along the northern portion of the above-mentioned topographical line, a rather well-defined escarpment between 500 and 1,000 feet high separates the coastal plain from an undulating plateau lying between 1,000 and 2,000 feet above sea level. The southern portion of this plateau has suffered considerable erosion and a well-defined scarp face no longer exists. This particular plateau contains other plateaus and remnants of other plateaus as well as several mountain ranges which attain heights of 5,000 to 6,000 feet above sea level. The highest peak in the country, Bintumane (6,390 feet), is located in the Loma Mountains of this plateau region.

One of the most distinctive physical features of Sierra Leone is the mountainous Western Area which is the only coastal region in West Africa possessing a significant mountain range. This area or peninsula is about twenty-three miles long and up to seven miles wide. The peninsula parallels the main coastline. The mountain area is encircled by a narrow coastal plain which merges with the provincial plain on its eastern side. Several plateaus exist within this mountain range and have been farmed extensively in the past; the highest peak in the range is Picket Hill, 2,912 feet above sea level.[5]

Geologically, over half of the country is granite, which covers about 90 per cent of the eastern highlands.[6] A strip of metamorphic rocks, known locally as the Kambui Schists, extends about twenty miles past Magburaka and north to Lake Sonfon.

5. H. R. Jarrett, "Some Aspects of the Urban Geography of Freetown, Sierra Leone," *Geographical Review*, XLVI (July, 1956), 334–354.

6. See the geological map of Sierra Leone in Pollett, "The Geology and Mineral Resources of Sierra Leone," facing p. 14.

Similar outcrops occur in Kenema and Kono districts, and it is in these schists and the Marampa Schists that most of the metallic ores of Sierra Leone exist. The outcrop of Marampa Schist runs about fifty miles in a northwesterly direction along the northern portion of the granite belt and is separated from the main portion of the granite belt by a continuous belt of rocks, known as the Rokel River Series, which stretches from Tikonko in Bo District to the Guinea border.

Approximately twenty miles inland and parallel to the coast is another schist, the Kasila Series, which comprises the main outcrop of crystalline schists, gneisses, and granulites of the basement rocks. No mineral deposits of any economic significance have been located in this schist. The narrow coastal strip consisting largely of recent sediments is made up of sand and clay. The hills of the Western Area are apparently geologically distinct from the remainder of the country and consist primarily of igneous rocks. Platinum, gold, and ilmenite have been mined commercially in the Western Area, and deposits of bauxite and other metals are known to exist. Precise estimates of the potential mineral resources of Sierra Leone are currently unavailable, as a complete geological survey of the country has not yet been made.

There have been no comprehensive soil surveys in Sierra Leone except for detailed studies of limited areas such as the "bolilands."[7] However, for classificatory purposes, the following three broad and not wholly unrelated soil categories may be delineated: (1) The soils of the north and the northeast consisting primarily of a reddish-brown laterite mixed with recent beach quartz sand. (2) The Laterite Zone, encompassing the major portion of the country, consisting of a reddish, primary laterite occasionally interspersed with sand and brown clay. This soil is generally more fertile than the type above and is more frequent in the southern and southeastern regions. (3) The alluvial soils paralleling the coast. The parent material frequently consists of brown silt and pale gray clay interspersed with laterite sands.

7. See A. R. Stobbs, *The Soils and Geography of the Boliland Region of Sierra Leone* (Freetown: Government Printer, 1963). The only large-scale, sample soil survey occurred in 1932. See F. J. Martin and H. C. Doyne, *Soil Survey of Sierra Leone* (Freetown: Government Printer, 1932).

In general it may be stated that most of the soils of Sierra Leone are relatively infertile when compared with the soil of the United States, for example. Although the soils are infertile, they are not totally incapable of production except in certain areas, such as in the southern coastal region where the soil is practically pure sand or in the littoral swamps where salinity restricts crop production. The potentially most productive and fertile soils are the alluvial soils located in the inland swamps, alluvial flood plains, and mangrove swamps. However, certain erosion problems, water conditions, the presence of sodium chloride, and a tendency toward a concentration of harmful iron salts associated with certain of these swamps tend to restrict their complete usage.[8]

The vegetation of Sierra Leone varies according to topographical, climatic, and soil conditions. In the northeast and central regions of the country where laterite prevails, the land is covered with lophira growth, low jungle, scrub, and grasslands; raffia swamps are scattered throughout. The eastern and southern regions are partially covered with high forest and contain the majority of the natural palm groves, cocoa and coffee trees, and forest reservations. The younger regions which are within reach of tidal action are covered with mangrove, while farm bush and scrub prevail in the non-swamp areas.

While no specific study of land use has been made for Sierra Leone, the estimates contained in Table 2 give some indication of land distribution and use according to major vegetation type; more detailed breakdowns are not available. It is evident from the table that the majority of the land in Sierra Leone is under closed forest, which is a highly differentiated category including secondary forest and farm bush. The remainder of the land is primarily open savannah woodland, and only about 4 per cent of the land is covered by high forest, i.e., the Government Forest Reserve or Protected Forests. These Protected Forests contain almost the entire stand of virgin forest, but it must be noted that an undetermined percentage of these forests are of a secondary nature.

8. E. A. Waldock, E. S. Capstick, and A. J. Browning, *Soil Conservation and Land Use in Sierra Leone* (Freetown: Government Printer, 1951), pp. 4–5.

Estimates of the acreage of land under cultivation for any given year are unavailable.

In order to complete this brief survey of the physical resources of Sierra Leone, the transportation system must be briefly described. A complete economic analysis of the transportation system and its relation to the development of cash markets and economic growth is not feasible here, and the following comments are primarily descriptive.[9]

Table 2. ***Land use in Sierra Leone according to major vegetation growth: 1951 and 1961***[a]

	1951		1961	
	Square miles	Percentage of total	Square miles	Percentage of total
Closed forest (including a large portion of secondary forest caused by shifting cultivation)	16,910	60.5	16,580	59.4
Open savannah woodland	7,847	28.1	7,850	28.1
Government Forest Reserve	835	3.1	1,030	3.7
Protected Forest (local authorities)	0	0	125	0.4
Swamps	2,337	8.4	2,340	8.4
	27,925	100.0	27,925	100.0

a. Estimate of area under cultivation not available.
Source: Sierra Leone, Department of Agriculture.

Construction of the first railway in West Africa began in Sierra Leone during the 1890's, and the first trains were operating in the Colony area in 1897.[10] By 1908 the main line was completed to Pendembu (227.5 miles) in eastern Sierra Leone and a branch line from Bauya to Makeni (82 miles) was opened in 1915. The railway was constructed in an attempt to secure firmer political control over the recently declared Protectorate in the hinterland of the Colony and to counter French and Liberian intrusions upon

9. See United Nations, Economic Commission for Africa, *Transport Problems in Relation to Economic Development in West Africa* (New York, 1963, E/CN.14/63), for a general discussion of these relationships.

10. A more complete history of the Sierra Leone Government Railway is found in J. Ralph Best, *A History of the Sierra Leone Railway 1899–1949* (Freetown: mimeographed, 1949), and Kande Bure, *Project for the Improvement of the Sierra Leone Railway* (Freetown: mimeographed by the Ministry of Transportation and Communications, 1964).

these boundaries. Economic considerations were not paramount in the beginning, but it was hoped that the railway would eventually contribute to the revenues of the colonial government.[11] F. J. Pedler, in a rather graphic description of West African railways in general, has portrayed quite adequately the Sierra Leone Government Railway:

> They [the railways] were built as acts of faith in the hope that traffic would later justify the cost. They were built by poor governments with borrowed money. They were therefore built cheaply. They have had to struggle with the problems resulting from cheap construction: with all the disadvantages of a single track; with curves that are too sharp; with rails too light to carry powerful engines; with bridges that are only intended for light work; and with gradients that have been known to make trains stop and run backwards.[12]

In addition to these problems, the Sierra Leone Government Railway (SLGR) has been handicapped by a narrow-gauge track (2 feet 6 inches) which has necessitated the purchase of special equipment and has reduced the haulage capacity of the railway relative to other African railways. The railway's annual receipts have exceeded annual operating costs in only two years of its nearly seventy-year history, and its accumulated deficit in 1963 exceeded £8.5 million.[13] In recent years the annual deficit has averaged nearly £500,000 even though the railway was dieselized in anticipation that operating costs could be reduced 40 to 50 per cent. Instead, average operating costs per ton-mile have increased steadily from about 7.7*d*. in 1950 to over 15*d*. in 1959/60, thus comparing unfavorably with the operating costs of 2.7*d*. for the Nigerian Railway and 3.7*d*. for the Ghana Railway.[14] There are no data whereby comparable statistics may be calculated for other forms of transportation in Sierra Leone, but the most recent transportation survey of the country indicates that, in general, highways

11. David Carney, *Ten-Year Plan of Economic and Social Development for Sierra Leone, 1962/63–1971/72* (Freetown: Government Printer, 1962), p. 36.
12. *Economic Geography of West Africa* (London: Longmans, Green, 1955), p. 113.
13. Carney, *Ten-Year Plan*, p. 37.
14. *Ibid*., p. 38; W. A. Hance, *The Geography of Modern Africa* (New York: Columbia University Press, 1964), p. 37.

provide the cheapest form of transportation.[15] A detailed cost study comparing alternative modes of transportation is needed if the railway is to be kept in existence on a deficit basis, since the sums currently used to subsidize the railway might be more profitably invested in other means of transportation.

Various proposals have been put forward since 1960 to phase out the railway gradually over the next ten to fifteen years, but such a measure cannot be undertaken unless alternative transportation services can be provided more cheaply and quickly than by the existing rail service.[16] One difficulty confronting those desiring to phase out the railway has been the layout of the road system. The roads were constructed to operate as a feeder system in order to prevent direct competition between the two transportation mediums.[17] Since the mid-1950's, however, the connection of the major cities by roads and the increasing number of commercial vehicles operating in Sierra Leone (see Table 3) have stimulated such competition. It is not possible to measure the amount of freight that has been diverted from rail to road transport, but some of the absolute decline in the tonnage of freight handled by the railway (from 126,000 tons in 1951 to 87,000 tons in 1963) may be attributable to increasing road competition.[18]

Table 3 reveals the growth in mileage of roads and number of vehicles since 1950. It can be seen that the number of vehicles has increased over sevenfold since 1950, with the greatest increase coming in the number of commercial vehicles registered. These figures may overstate the actual number of vehicles in use, for road conditions and the lack of adequate maintenance facilities

15. See Transportation Consultants, Inc., *Transportation Survey of Sierra Leone* (Washington, D.C.: Transportation Consultants, 1963), pp. 20–40.

16. At present about 100,000 tons of freight are hauled by the railway, most of which is up-traffic (primarily imports) rather than down-traffic (primarily exports). In former French West Africa, the principle has been accepted that no extension of the rail system can occur if new freight over the whole line cannot be expected to reach 150,000–200,000 tons per year. These figures suggest that SLGR is significantly less than optimal size (UN/ECA, *Transport Problems*, p. 15).

17. During the 1930's the government attempted to restrict such competition by imposing tolls on the use of certain roads (Church, *West Africa*, p. 327).

18. Sierra Leone, *Quarterly Statistical Bulletin*, No. 3 (Sept., 1964), p. 30. An alternative or complementary explanation of the decline in railway freight tonnage involves the relative change in the composition of exports from agricultural produce to mineral production. Diamonds, the leading export, are small in weight, and all iron ore exports, the second largest export, are handled by a private fifty-two-mile railway.

cause rapid deterioration of motor vehicles.[19] The mileage of roads has nearly doubled over the same period of time, but less than 300 miles of these roads are paved. The remainder are surfaced with laterite or gravel, and many of these roads become impassable during the rainy season as washouts of roads and bridges are common.

Table 3. ***Roads and motor vehicles in Sierra Leone: 1950–61***

Year	Vehicles registered: Commercial	Private	Total	Miles of road	Vehicles per mile of road	Road mileage per square mile of land	Road mileage per 1,000 inhabitants
1950	444	936	1,380	2,074	0.67	.074	1.05
1951	426	1,044	1,470	2,175	0.68	.078	1.07
1952	960	1,258	2,218	2,376	0.93	.085	1.14
1953	965	1,709	2,674	2,764	0.97	.099	1.30
1954	1,421	1,928	3,346	2,876	1.18	.103	1.33
1955	2,136	2,805	4,931	2,963	1.66	.106	1.34
1956	1,835	2,979	4,814	3,120	1.54	.112	1.37
1957	2,308	3,960	6,268	3,224	1.94	.115	1.39
1958	2,400	5,156	7,556	3,444	2.20	.123	1.45
1959	3,444	5,338	8,782	3,594	2.45	.129	1.48
1960	3,664	5,338	9,002	3,770	2.40	.135	1.52
1961	5,077	6,461	10,538	3,784	2.77	.136	1.49

Sources: Edward Davies, *Roads and Road Transport in Sierra Leone* (Freetown: mimeographed, 1962), p. 15, and Transportation Consultants, *Transportation Survey*, p. 10.

Following the recommendations of Transportation Consultants, Incorporated (TCI), and Rendel, Palmer and Tritton of London, the government has given top priority in road construction to a new highway between Bo and Taiama. This road will shorten the present 180-mile trip from Freetown to Bo by 17 miles, or approximately a 10 per cent reduction.[20] Traffic counts taken on the road between Bo and Taiama indicate that approximately 40 cars per day used the present route in 1964 (some cars may use longer

19. Transportation Consultants, Inc., estimates the average life of a new commercial vehicle to be about twenty-four months (*Transportation Survey*, p. 31). E. K. Hawkins estimates a three-year life for vehicles driven on laterite roads in Uganda (*Roads and Road Transport in an Underdeveloped Country*, London: H.M. Stationery Office, 1962, p. 164), and G. Walker suggests that the average life of commercial vehicles in Nigeria is also relatively short (*Traffic and Transport in Nigeria*, London: H.M. Stationery Office, 1959, pp. 110–111). None of the sources provide estimates of the ton-mileage life of such vehicles.

20. Part of the following analysis is based on a conversation with Mr. Robert Camp, an American civil engineer from Purdue University working for the Agency for International Development (AID), in February, 1965.

northern routes). Since traffic on this section of road may travel safely at about thirty-five miles per hour, the new linkage will result in a saving of about 30 minutes per car, or a total of 20 vehicular-hours per day. If one could place a value on the time saved and other benefits that might be derived from constructing the new road, such as providing transportation to heretofore isolated villages, then the benefits of the new road versus the probable costs could be compared. Mr. Robert Camp estimates that construction of the new road will cost approximately £100,000 per mile while the existing road could be brought up to a "satisfactory" level with an outlay of about £10,000 per mile. Thus, unless there are large external benefits to be derived from "opening up" the area under consideration (there are no large villages on the proposed route), it would seem unlikely that the existing traffic patterns would justify the government's decision on economic grounds alone. However, economic considerations appear to have given way to other matters in this particular instance (and in others to be dealt with later), with the consequence that the overall transportation system and hence the economy may suffer.

Sierra Leone is fortunate in having one of the largest natural harbors in the world, but until 1954, when the first deep-water quay was built, all freight and passengers had to be transferred ashore by small shore craft. Since that period, the tonnage of cargo handled at Freetown has increased from 1,190,000 tons to 2,788,000 tons in 1963.[21] No information exists concerning inland water traffic, but the presence of rapids near the mouths of most of the major rivers limits commercially valuable waterways to about four hundred miles.

Finally, Sierra Leone has an international airport at Lungi across the estuary from Freetown, a location which requires a rather lengthy bus and launch trip to and from Freetown. The airport is served by several African airlines, and direct connection with London is now available once a week. Internal air travel is somewhat restricted since there are only five actively used airfields served by two commercial and four privately owned planes.[22]

21. Sierra Leone, *Quarterly Statistical Bulletin*, No. 3 (Sept., 1964), p. 36.
22. Transportation Consultants, *Transportation Survey*, p. 110.

In summary, transportation facilities appear to be below the standards existing in other West African countries, but it cannot be determined whether the existing transportation system is inadequate relative to the demand for such services. Further detailed analysis is necessary in order to answer this question.

B. Population and the Labor Force

The growth and movement of population is related to the growth and development of an economy in a complex system of "cause" and "effect." Variables and parameters connected with population attributes (size, rate of growth, density, education, skill, migration, etc.) act as constraints to and as opportunities for economic development, while economic development feeds back upon population attributes, thus conditioning future economic growth. Within the context of the Sierra Leonean economy, these functional interrelationships cannot be examined in any detail because of a lack of fundamental knowledge concerning the present and past structure and composition of the population. Accordingly, the emphasis of this section will be placed upon a description of the population and how its present composition may affect the growth of individual sectors of the economy analyzed in later chapters. The first part of this section will concentrate upon the data gathered from the first comprehensive census of population taken in Sierra Leone (1963), while the second part will examine the size of the potential labor force, its skills, education, and occupational structure.

1. *General Population Characteristics*

Legislative prohibitions against non-African settlement and landholding in the provinces of Sierra Leone, as in other former British West African colonies, have maintained the racial composition of the Sierra Leone population. Although the preliminary results of the 1963 census do not indicate the national origins of

the population, it is generally believed that the total number of Europeans, Americans, and Asiatics is less than 4,000.[23] Since the 1963 census reported a total population of 2,180,000, non-Africans apparently comprise less than one-fifth of 1 per cent of the total population.[24] The African population is composed primarily of members of the Temne and the Mende tribes, each tribe forming about 30 per cent of the total population. Eleven other indigenous tribes and immigrants from other African countries account for the other 40 per cent of the population.[25]

The rate of growth of the population cannot be ascertained with any degree of certainty because all population estimates before 1963 are based on tax returns or administrative guesses and not on complete censuses or scientifically designed sample surveys.[26] Using the population estimate for 1950, which was 1,880,000, the annual rate of population growth between 1950 and 1963 was 1 per cent. This percentage increase corresponds with the natural rate of increase of 11 per 1,000 recorded from crude birth and death registrations for the former Colony between 1945 and 1954,[27] but it is not known how representative this figure is for the period since 1954 or for other geographic regions. (This

23. Lebanese are the most numerous non-African group. In 1962 the Department of Immigration estimated that there were 1,728 Lebanese immigrants in Sierra Leone. This figure does not include persons of Lebanese parentage born in Sierra Leone (Sierra Leone, House of Representatives, *Parliamentary Debates*, Vol. II, Freetown: Government Printer, Dec., 1962, Questions 205).

24. All population figures given in this section were computed from Sierra Leone, Central Statistics Office, *1963 Census of Population of Sierra Leone: Advance Reports*, Nos. 1–14 (Freetown: mimeographed, 1964).

25. Because of the heterogeneity of the population, a lingua franca, known locally as Creole, has evolved. This language is based on English and various African languages but has developed its own grammatical and linguistic structure. Many primary schools in Freetown employ Creole exclusively in the lower grades, and it is not uncommon to hear Creole in university classrooms.

26. The director of the census, William George, stated to the author that the 1963 census contains a probable error of ± 10 per cent. The most authoritative analysis of the censuses before 1946 is contained in R. R. Kuczynski, *Demographic Survey of the British Colonial Empire* (London: Oxford University Press, 1948), I, 19–307.

27. United Nations, *Demographic Yearbook, 1963* (New York, 1964), pp. 486–487. The yearbook records a crude birth rate of 35 per 1,000 between 1945 and 1954 and a death rate of 22–23 per 1,000 for the same period. Mortality and fertility data of more recent vintage are lacking, and the above figures are of questionable validity. *The Population Bulletin of the United Nations*, No. 7 (New York, 1963), states, "The principal African countries now lacking bases for estimates of the fertility level include . . . Sierra Leone . . ." (p. 15).

figure, of course, does not include net migration.)[28] Although birth and death registrations are compulsory in the Western Area, evasion is widespread, and the figures are thus suspect. If it is assumed that mortality and fertility rates in Sierra Leone are similar to rates of other West African countries, it would appear that the actual rate of population growth is nearer 2 or 2.5 per cent per year than 1 per cent.[29] A growth rate of 2 per cent will be accepted as the best estimate of the growth rate of the population of Sierra Leone.

As in most countries of the world, the urban population of Sierra Leone appears to be expanding more rapidly than the population of the rural areas because of net migration to the cities (there are no data relating to relative differences in birth and death rates between rural and urban areas). Freetown, the only large city in Sierra Leone, has grown at an average annual rate of 3.1 per cent since 1947 to a present population of 128,000, while other urban areas have experienced similar rates of growth. Urbanization in Sierra Leone, however, is not extensive. Only seven cities and towns have populations exceeding 10,000, and only 15.2 per cent of the population lives in towns with populations of 3,000 or more. Even if the concept of urbanization is extended to include all villages and towns having 1,000 or more people, the percentage of urban dwellers in the total population increases to only 26.3 per cent, and most of these smaller villages are inhabited predominantly by farmers.[30] However, even the limited ex-

28. The only available statistics dealing with the provinces are for 1947, and these figures show a crude death rate per 1,000 (38.4) exceeding the crude birth rate (32.9) (R. D. Harding, "A Note on Some Vital Statistics of a Primitive Peasant Community in Sierra Leone," *Population Studies*, II, Dec., 1948, 373–376). V. R. Dorjahn also has some general comments on fertility in the rural areas in "Fertility Polygyny and Their Interrelations in Temne Society," *American Anthropologist*, LX (Oct., 1958), 838–860.

29. *The Population Bulletin of the United Nations*, No. 7, says that "present estimates indicate exceedingly high fertility prevails in much of West Africa. Crude birth rates above 50 and gross reproduction rates of 3.0 and up appear to be the rule in countries west of Cameroon and Chad . . ." (p. 21). The United Nations *Demographic Yearbook* for 1963 lists a crude birth rate of 52 per 100 for Freetown, indicating the urban area conforms to the general pattern in West Africa. Listed rates of growth for other West African countries are: Senegal 2.3 per cent, Liberia 1.4 per cent, Niger 3.2 per cent, and Gambia 2.5 per cent (*Demographic Yearbook, 1963*, pp. 92–95).

30. Sierra Leone, Central Statistics Office, *Population of Sierra Leone Towns: Census April 1963* (Freetown: mimeographed, 1964), pp. 1–2.

tent of urbanization is having substantial effects upon tribalism, social mores, and political and economic institutions.[31]

The migratory characteristics of the Sierra Leonean population are difficult to ascertain because of the absence of reliable statistics, but it is frequently stated that "the migration of labour is not very common in Sierra Leone."[32] Although the international movement of population into and out of Sierra Leone may be limited, the extent of internal migration should not be underestimated.[33] A recent sample survey of Freetown showed that only 26.7 per cent of the enumerated heads of households were born in Freetown, and a study of the population of Lunsar (a city in northern Sierra Leone with a population of about 10,000) revealed that only 10 per cent of the adult males were born there.[34] There is no indication whether the enumerated adult males are permanent or long-term residents of the towns in question, but there is some indication that a large number of adult males eventually return to their provincial homes.[35] In earlier years, migration from rural areas to rural areas was common,[36] but increases in population and corresponding pressures on arable land have tended to restrict such lateral movements. At present, the migration of people is almost always a vertical displacement between

31. See, for example, Michael Banton, *West African City: A Study of Tribal Life in Freetown* (London: Oxford University Press, 1957), and David P. Gamble, "The Temne Family in a Modern Town (Lunsar) in Sierra Leone," *Africa*, XXXIII (July, 1963), 209–225.

32. Sierra Leone, Labour Department, *Annual Report of the Labour Department, 1960* (Freetown: Government Printer, 1962), p. 14. The International Labour Organization reported in 1955 that "in Sierra Leone there is little industrial development and migratory labor is practically non-existent, except for a small number of rural dwellers drawn to urban Freetown and the developing mining industry in Sierra Leone" (*Migrant Workers* [*Underdeveloped Countries*], Geneva, 1953, p. 31).

33. The extent of international migration should similarly not be underestimated. Howard J. Kumin, *Report to the Government of Sierra Leone on Revision of the Consumer Price Index—Freetown: The Mine Workers Price Index and Statistics of Employment* (Geneva: International Labour Organization, 1962), p. 47, shows 7.5 per cent and 5.7 per cent of the heads of households in Freetown come from Guinea and Liberia respectively. Foreign migration to the diamond areas has also been substantial since the mid-1950's (see chap. ii).

34. *Ibid.*, p. 47; Gamble, "The Temne Family in a Modern Town (Lunsar)," p. 209.

35. Banton, *West African City*, Part II. Walter Elkan has documented the impermanence of urban dwelling in Uganda in *Migrants and Proletarians* (London: Oxford University Press, 1960).

36. V. R. Dorjahn and C. Fyfe, "Landlord and Stranger: Change in Tenancy Relations in Sierra Leone," *Journal of African History*, III (1962), 391–397.

rural and urban areas. The reasons behind the movement of population include both economic and non-economic elements, but one suspects that the economic elements tend to override all others.[37] In most instances, migrants leave their home communities when local opportunities deteriorate relative to opportunities presenting themselves elsewhere and when these opportunities promise sufficient rewards to cover the cost of movement to other areas.

Table 4. *Population density of the twelve rural districts: 1931 and 1963 people per square mile*

	1931	*1963*
Northern districts		
Port Loko	93	131
Tonkolili	57	117
Kambia	94	115
Bombali	83	101
Koinadugu	20	28
Southern districts		
Kailahun	101	97
Bo	79	98
Kenema	76	100
Moyamba	50	63
Bonthe	73	54
Pujehun	58	52
Kono	35	77

Sources: R. R. Kuczynski, *Demographic Survey*, p. 161, and Sierra Leone, Central Statistics Office, *1963 Census of Population of Sierra Leone: Advance Reports*, Nos. 1–14.

The deterioration of local economic opportunities appears to be related in part to declining bush fallows and soil fertility. Unfortunately, sufficient information concerning degraded land areas and population movements does not exist to permit the empirical testing of such a hypothesis, but there are various indications that this has in fact occurred. For example, Kumin's sample survey of Freetown shows that migrants from the three most densely populated districts in Sierra Leone (see Table 4) accounted for more

37. See the comments of Joseph J. Spengler, "Population Movements and Problems of Sub-Saharan Africa," *Economic Development for Africa South of the Sahara*, ed. E. A. G. Robinson (New York: St Martin's Press, 1964), pp. 293–300. Banton, *West African City*, pp. 48–49, emphasizes non-economic motivations.

than one-third of all the heads of households in the survey, while the other nine districts accounted for only 17.3 per cent.[38] This movement occurred in spite of the fact that these districts support the largest concentration of intensive farmers—swamp rice farmers—in the country.

The response of the Sierra Leonean to economic incentives outside his immediate locale is also indicated by the change in estimated population densities since 1931. The two areas experiencing the largest percentage change in population densities, Kono and Tonkolili districts, are the districts where iron ore and diamonds have been found since 1925. These districts have presented economic opportunities for wage- or self-employment, and Sierra Leoneans from every district have taken advantage of these opportunities by migrating to these areas. Moreover, the two districts experiencing absolute declines in population densities, Bonthe and Pujehun, are southwestern districts where the silting up of the rivers has resulted in a decline in their port activities and urban populations.[39]

Thus, in Sierra Leone there has been a movement from rural to urban areas and a redistribution of the manpower resources in response to shifting economic opportunities, changing labor demands, easing of transportation obstacles, and non-economic incentives. Many of these migrants return to their home villages following their sojourn in the urban communities, but the extent of such movements cannot be quantified. Population pressure on the land does not exist in every district, but in certain coastal regions the growth of population appears to have resulted in the degradation of the soil, thus inducing the migration of large numbers of farmers.

2. *The Labor Force*

The Central Statistics Office has not yet published its findings from the 1963 census concerning the number and occupational distribution of the economically active population, so only a crude

38. *Report to the Government*, p. 47.
39. Banton, *West African City*, p. 73.

approximation of the total working force can be made here. If it is assumed that the potential working force encompasses all individuals between the ages of 15 and 65, then 68.2 per cent of the population may be regarded as potential workers, according to the 1963 census. Of this potential labor force, an unknown percentage must be excluded for various reasons, such as retirement, unemployment, schooling, and housework. Howard J. Kumin, who conducted a sample survey in Freetown in 1961, reports that 65 per cent of the total population surveyed between the ages of 15 and 65 were economically active; if this percentage is applied to the entire country, approximately 45 per cent of the total population (or about one million people) are members of the labor force.[40] This percentage may understate the actual size of the working force, since the percentage of rural inhabitants between the ages of 15 and 65 who are economically active may be higher than the percentage prevailing in Freetown; however, the crude approximation does permit certain comparisons.

Of the one million people who are economically active, less than sixty thousand are employed by the government and by private firms hiring six or more workers. Table 5 shows the distribution, by major industrial group, of these workers since 1956. (Employment statistics issued before 1956 are not strictly comparable with those given in Table 5 because of a change in the reporting procedures of the Labour Department.) It is apparent from the table that no major change in the structure of employment has occurred since 1956, even though the relative importance of the service component has increased at the expense of commerce and transportation. In addition to the employment figures listed in Table 5, a large but undetermined number of workers are employed in various cottage industries such as weaving, dyeing, and ceramics; but even if their total employment equals or even doubles the employment of firms with six or more workers, that would indicate that only 15–20 per cent of the labor

40. *Report to the Government*, p. 39, Table 6. The United Nations *Demographic Yearbook, 1964* gives the following percentages of economically active people in the total population for selected countries: Guinea 51.2 per cent, Niger 55.3 per cent, Senegal 42.4 per cent, Ghana 40.5 per cent, U.S. 39.0 per cent, U.K. 42.3 per cent (Table 8).

Table 5. *Number and percentage of people employed by industrial group: 1956–63*[a]

Industrial group	*1956*	*1957*	*1958*	*1959*	*1960*	*1961*	*1962*	*1963*
All industries	41,078	43,244	47,046	46,341	47,874	51,520	53,516	57,609
Agriculture, forestry, and fishing	141 (3.4)	1,528 (3.5)	1,449 (3.1)	1,504 (3.2)	1,813 (3.8)	2,510 (4.9)	2,673 (5.0)	3,516 (6.1)
Mining	5,418 (13.2)	6,017 (13.9)	6,074 (12.9)	6,025 (13.0)	6,047 (12.6)	6,146 (11.9)	7,546 (14.1)	8,078 (14.0)
Manufacturing	2,321 (5.7)	2,352 (5.4)	2,611 (5.4)	2,917 (6.3)	3,004 (6.3)	3,652 (7.1)	3,371 (6.3)	4,431 (7.7)
Construction	8,842 (20.6)	8,244 (20.0)	9,768 (20.8)	8,608 (18.6)	8,689 (18.1)	11,424 (22.2)	10,345 (19.3)	11,674 (20.3)
Electricity, water, and sanitary services	997 (2.4)	884 (2.0)	1,011 (2.1)	1,204 (2.6)	993 (2.1)	1,049 (2.0)	1,178 (2.2)	1,457 (2.5)
Commerce	4,498 (10.9)	4,821 (11.1)	4,881 (10.4)	4,801 (10.4)	4,355 (9.1)	4,497 (8.7)	4,694 (8.7)	4,365 (7.6)
Transport, storage, and communications	8,032 (19.3)	9,082 (21.0)	9,828 (20.1)	8,901 (19.2)	8,961 (18.7)	8,675 (16.8)	7,477 (14.0)	7,093 (12.3)
Services	9,955 (24.2)	10,313 (23.9)	11,424 (24.3)	12,381 (26.7)	14,012 (29.3)	13,567 (26.3)	16,233 (30.3)	16,995 (29.5)

[a] Information is based on returns from employers of six or more workers and thus omits most agricultural employment. Percentage figures are given in parentheses below employment figures.
Sources: Sierra Leone, *Annual Report of the Labour Department*, 1956–60, and Sierra Leone, *Quarterly Statistical Bulletin*, No. 3 (Sept., 1964), p. 57.

force is self-employed or employed for wages. The remainder of the economically active population is thus engaged in agriculture or agriculturally related pursuits and may be presumed to be unskilled.

The government is the largest single employer in the country. Since 1946 the percentage of governmental employment relative to total wage employment has dropped below 50 per cent in only two years, 1949 and 1953, and the percentage for 1961, the latest year available, is 56.2 per cent.[41] It is obvious then that the wages set by the government influence the structure of wages prevailing in the private sector, a fact which may tend to reduce the power of the established labor unions.

The paragraph and statistics above describe the present structure of employment in the economy of Sierra Leone, but they fail

41. Sierra Leone, *Annual Report of the Labour Department*, 1946–63.

to reveal the availability of skilled manpower, which may be one of the most crucial constraints confronting the further development of the economy. Recent studies of investment in human capital stress the interdependence of human capital formation and economic growth and call attention to the fact that the ability of an economy to absorb increasing amounts of physical capital profitably depends upon the availability of sufficient quantities of skilled and knowledgeable workers.[42] Indiscriminate investment in education and training will not alleviate specific manpower shortages, for the solution to manpower problems, stated in terms of an optimal solution, requires the equalization of the rates of return on human and physical capital in both the public and the private sectors. Unfortunately, the lack of relevant data and information—e.g., the amount of human capital accumulated in the past and the income streams derived from these capital investments—prevents quantitative determination of various rates of return on human capital investments. Hence, the provision of educational and training facilities must proceed to a certain extent on an *ad hoc* basis; that is, resources must be allocated and reallocated as manpower shortages impinge upon particular sectors or industries.

In recent years, developed and underdeveloped countries have attempted to reduce the amount of uncertainty concerning future manpower needs by conducting surveys designed to project demands for various categories of manpower. These surveys are necessarily conjectural, but they provide rough guidelines by which public and private expenditures for education and training may be allocated. In 1964, Sierra Leone conducted a manpower survey, but the results are of little value because of the procedure used to derive the estimates. The survey consisted of a questionnaire mailed to every governmental agency and private firm employing six or more workers. The questionee was requested to report present, intermediate, and high-level manpower employ-

42. See G. M. Meier, *Leading Issues in Development Economics* (New York: Oxford University Press, 1964), pp. 266–284, esp. p. 269, n. 9; F. Harbison and C. Myers, *Education, Manpower and Economic Growth* (New York: McGraw-Hill, 1964); and F. Harbison, "The African University and Human Resource Development," *Journal of Modern African Studies,* III (May, 1965), 53–62.

ment (administrative, professional, technical, and clerical staff) and to estimate manpower requirements for 1969. The returns were then tabulated and submitted to the government as an estimate of manpower needs for 1969. No attempt was made to check individual estimates within a given industry against one another or against independent estimates of future demands for the final products of the firms in question. The report merely concluded that the existing stock of intermediate and high-level manpower would have to increase by 10 per cent per year until 1969.[43]

Table 6. ***Occupational summary of intermediate and high-level manpower in Sierra Leone: number employed, March 1964***

	Public sector		Private sector	
	Sierra Leoneans	*Other*	*Sierra Leoneans*	*Other*
Professional, technical, and related workers	5,579	504	791	655
Administrative and executive	639	60	125	291
Clerical workers	1,339	17	1,629	148
Salesworkers	0	0	288	62
Farm managers	0	0	5	0
Transport and communication workers	225	16	118	44
Services, sport, and recreation workers	23	0	9	3

Source: Robert Brown, *Interim Report,* Table I.

The importance of the survey for this section is not its crude estimation of future manpower needs but its findings concerning the distribution of skills among the existing labor force and between government and private employment. The survey shows that out of an estimated 60,000 workers, only 12,570 could be classified as intermediate or high-level manpower (see Table 6). Of the 12,570, one-quarter were teachers at all levels of education, and one-third were clerical workers. Because of the large number of teachers and clerical workers employed by the government, over 65 per cent of the enumerated employees were engaged by

43. Robert Brown, *Interim Report to the Government of Sierra Leone on the Manpower Situation* (London: Department of Technical Co-operation, 1964), para. 37.

the government. (The projections of the survey estimate that this percentage will rise to 70 per cent in 1969.) The survey also revealed that 15 per cent of the workers surveyed were expatriates holding key positions in both the public and the private sectors. For example, 57 of the 77 professors at Fourah Bay College were expatriates; 75 per cent of the 267 architects, engineers, and surveyors were expatriates (the percentage increases to 87 per cent if the public sector is excluded); 24 of the 36 chemists and physical scientists were foreigners; and 71 per cent of the 194 directors and managers in the private sector were expatriates (60 per cent if the public sector is included).[44]

The ability of both the private sector and the public sector to import foreign specialists for key positions suggests that manpower deficiencies at the highest levels may be minimal. The acute shortage of manpower, as indicated by the annual reports of the various ministries, is at a subprofessional, technical level, e.g., agricultural assistants, mechanics, nurses, stenographers. For example, the Railway Department stated in its annual report for 1960/61 that:

> it became increasingly clear during the year that an increasingly large percentage of failures were due to inadequate attention to routine maintenance procedures. In common with many other countries of the world, Sierra Leone has to face new technical and staff problems created by dieselisation and, until such time as local staff of the right calibre can be thoroughly trained in theory and practice of diesel engine maintenance, it will be essential to enlist outside assistance to obtain the full benefit of dieselisation.[45]

The Electricity Department reported in 1959/60 that "there are still many men who require constant supervision, and there is still

44. The percentage of expatriates in the labor force would have been higher had the government not been pursuing the policy of Africanizing all governmental posts as soon as possible. See Sierra Leone, *Government Statement on Africanisation,* Sessional Paper No. 4 of 1959 (Freetown: Government Printer, 1959).

45. Sierra Leone, Railway Department, *Report of the Railway Department, 1960/61* (Freetown: Government Printer, 1962), p. 3. In 1954 the report stated, "Particular difficulty is encountered in recruiting staff required to fill the posts of Foreman Platelayers, a job which leads ultimately to the senior post of Permanent Way Inspector. Youths of sufficient educational standards are loathe to undertake the 5 years apprenticeship necessary, as it envolves hard manual work. . . . Every adjustment has been made including adjustment of salary scales" (p. 6). The report does not indicate whether five years are necessary to train the workers. One suspects that the period of apprenticeship is unnecessarily long.

a serious shortage of men capable to locating and remedying faults on the increasing number of machines and apparatus being installed."[46]

Additional examples of reported manpower deficiencies will be cited in later chapters, but enough has been said here to indicate the types of shortages encountered which tend to restrict the capacity of Sierra Leone to absorb increasing amounts of physical capital. At the present time, the educational system of Sierra Leone is not designed to alleviate these lower-level manpower problems for two basic reasons: with the English educational system still prevailing, only 25 per cent of the school-age children attend school, and over 60 per cent of those drop out before the completion of six years of schooling.[47]

The primary and secondary curriculums of Sierra Leone follow the traditional English system in that they are designed to lead to a university education. The distribution of secondary school places by curriculum for 1963 shows that 86 per cent were in academic training and only 1.5 per cent were in technical training, the remainder being classified in a category entitled "secondary modern."[48] This tendency toward academic training in the secondary school system is not offset by technical or vocational training at either university or postprimary levels of education. Only 600 full-time students were enrolled in the seven technical and vocational schools of Sierra Leone, and only one-quarter of these students were studying engineering and/or building trades; the remainder were enrolled in commercial and domestic science.[49] On the university level, of the 160 Sierra Leonean students matriculated at Fourah Bay College, over one-half were working toward a B.A. (general) degree and one-quarter toward a B.A. economics degree. Only seven Sierra Leoneans were engineering students and nineteen were B.SC. pure science students (seven of these being honors mathematics students).[50] An undetermined

46. Sierra Leone, Electricity Department, *Report of the Electricity Department, 1959/60* (Freetown: Government Printer, 1962), p. 3.
47. G. F. Sleight, *The Development Programme in Education for Sierra Leone, 1964–70* (Freetown: Government Printer, 1964), pp. 1, 10.
48. *Ibid.*, p. 25.
49. *Ibid.*, pp. 22–23.
50. Sierra Leone, *Quarterly Statistical Bulletin*, No. 3 (Sept., 1964), p. 56.

number of Sierra Leoneans were studying overseas, but these students tended to concentrate on the study of law and medicine, as degrees in these professional fields are not offered at the national university.

Since the majority of the population[51] is engaged in agriculture and since the development of the entire economy depends in part upon the modernization of this sector, one would expect that programs would be instituted to channel students into agricultural studies. However, only six or seven students annually complete collegiate agricultural studies in Sierra Leone (plus a few completing work in foreign countries); most of these graduates, however, are absorbed into administrative positions with the Department of Agriculture, where their contribution to the augmentation of agricultural production is minute. An agricultural college was established at Njala in 1964 which can handle approximately 100 students; but almost 80 of these students are training for educational degrees in agriculture—training which will permit them to teach in primary and secondary schools—and only 20 are training to become actual farm extension workers. At present, there are only 50 senior agricultural officers (about 1 agricultural officer per 20,000 farmers), and the educational system is not designed to increase their numbers rapidly. Note, for example, the pessimistic conclusion of a recent survey team from the University of Illinois:

> We conclude . . . that the current educational enterprise in Sierra Leone is not sufficiently committed to the solution of these problems. In view of the traditional heritage of the educational system, we have serious doubts as to whether there is an existing institution, or group of institutions, which can and will be altered and redirected in such a manner as to provide the leadership to develop the kind of agricultural and educational program so urgently needed in Sierra Leone.[52]

The shortage of lower-level technical personnel persists despite a threefold increase in primary and secondary school attendance during the past ten years. (Primary school attendance increased from 35,000 in 1943 to 103,000 in 1963, and secondary attendance from 3,603 to 9,756.) The majority of the pupils receive only one

51. See pp. 25 above and 34 below.
52. University of Illinois Survey Team, *Education and Agricultural Development in Sierra Leone* (Freetown: Government Printer, 1963), p. 18.

or two years of education and may not become functionally literate or retain their literacy for more than one or two years. These pupils, for all practical purposes, cannot become skilled workers unless they serve long apprenticeships or attend trade schools. It is frequently suggested, however, that "a certain stigma of inferiority is almost inevitably associated with schools of this type" (technical and non-academic),[53] or that the local population has a preference "for white-collar jobs" and a lack of "interest for commerce."[54] If these assessments are true, it should be possible to lower the wages of white-collar jobs in both governmental and private work to alter the prestige ratings Sierra Leoneans give these occupations. Such a move, however, is undoubtedly politically infeasible, and Sierra Leone will have to rely on foreign personnel to offset local deficiencies.

Brief mention should also be made of labor unions in Sierra Leone.[55] Labor union members comprise about one-quarter of the wage earners of Sierra Leone, but only about one-half of the listed trade unionists are members in good standing. These unions are rather stable organizations, perhaps because their role differs from that of trade unions in more developed countries. At the risk of oversimplification, it may be said that the trade unions are primarily social and political organizations rather than economic organizations. The variation in the functions of trade unions in Sierra Leone as opposed to other countries stems from the fact that wage rates, holidays, and grievances are determined or handled by Wages Boards and Joint Industrial Councils rather than by direct collective bargaining between employers and union representatives.[56] These statutory bodies may and do solicit testimony from both employers and employees, but the boards and councils possess ultimate power to determine wage rates and holidays and need not review past or present wage structures unless they so desire. The trade unions lobby with the boards and councils, but

53. Sleight, *Development Programme in Education*, p. 25.

54. Henry Fergusson, "Sierra Leone," unpublished paper presented to the Second Afro-European Seminar, Berlin, 1963, p. 3.

55. See B. C. Roberts, *Labour in the Tropical Territories of the Commonwealth* (Durham, N.C.: Duke University Press, 1964), for a fuller treatment of labor unions in Sierra Leone.

56. At present there are five Wages Boards (Mining, Maritime, Printing, Agriculture, and Fishing) and four Joint Industrial Councils (Artisan, Transport, Port, and Commerce).

the extent of their power is limited since the unions may not strike over the decisions of the statutory bodies. This lack of economic power may explain why so many workers have become inactive in the trade union movement.

The aggregate employment effects of the determination of wages through the Wages Boards and Joint Industrial Councils cannot be ascertained with any degree of certainty, but it will be argued in Chapter 4 that the Mining Wages Board has tended to reduce employment below levels that would have prevailed had the board not existed. The analysis in Chapter 4, however, cannot be generalized since the actions of one Wages Board are not necessarily related to the actions of other Wages Boards (there is no national wage policy), and productivity increases cannot be calculated for other industries covered by the boards. The absolute amount of unemployment has increased since 1955, when only 1,194 workers were registered with the Sierra Leone Employment Exchange, but the increase in unemployment may be due more to the greater use of the exchange by urban workers and unskilled migrants from the provinces than to the wage policies of the Wages Boards.[57] In any case, the rate of unemployment has also increased from a low of 2.2 per cent in 1956 to a high of 8.4 per cent in 1963 and may be expected to continue at this level or a higher level unless rapid economic growth occurs and/or fewer unskilled workers come into the labor market. Neither event is likely to happen in the near future.[58]

C. Summary

Sierra Leone is a small, tropical, African country which is rather sparsely peopled by a predominantly Negroid population. Less than 30 per cent of the population resides in towns and cities with

57. Unemployment figures are from International Labour Organization, *Bulletin of Labour Statistics*, 2nd quarter (Geneva, 1965). These figures do not include the approximately 4,000 workers registered with the Maritime Pool in every year since 1956.

58. The *Annual Report of the Labour Department, 1960* shows that nearly three-fourths of all workers registered at the exchange are unskilled laborers or artisans. The report also notes that "it was again difficult as in the previous year to find qualified stenographers, auto-electricians, welders, and plumbers to fill vacancies" (p. 4).

more than 1,000 inhabitants. The vast majority of the rural dwellers are illiterate (only 5–10 per cent of the total population is literate), unskilled agricultural workers who utilize rather primitive production techniques. The growth of the rural population during the twentieth century, the corresponding pressures on the land, and the lure of Freetown and the larger towns of the provinces have contributed toward the migration of workers from rural to urban areas; but the available statistics are not complete enough to permit measurement of the size and direction of these population flows. In the past, the primitive nature of the transportation and communication systems has tended to impede migration, but the extension and improvement of the existing systems since World War II have removed some of the previous obstacles to population movement and have made the natural resources of the country more open to exploitation. (Before 1945 the Western Area and the provinces were not connected by a road which could be traversed by motor vehicles.) Since the migrants from the provinces are largely unskilled, any increase in the rate of migration will undoubtedly raise the already sizable unemployment rate in Freetown (in excess of 8 per cent) unless rapid economic growth occurs.

The lack of skills and education of the African population has been partially offset in the past by the employment of expatriate personnel. Expatriates, however, have been employed primarily at upper-level positions, and acute shortages of subprofessional manpower have emerged. Unfortunately, the educational system and the prestige of white-collar work have tended to restrict the flow of workers to these occupations, and there is no indication that either obstacle can be quickly overcome. As in most African countries, the number of pupils enrolled in primary and secondary schools has increased rapidly during the past decade; nevertheless, only 25 per cent of the school-age population attends school, and universal primary education is not expected to be achieved within the next decade. The failure to obtain universal primary education earlier may, however, act to restrain total unemployment by restricting the movement of young adults to the urban areas.

• 2 •

Agriculture in Sierra Leone

The agricultural sector of the Sierra Leonean economy has received scanty attention from economists and statisticians. Anthropologists, sociologists, and agronomists have examined in some detail the land tenure system, the soils, the tools and basic techniques used by specific farmers, and other related matters. Despite their efforts, however, much basic information remains unavailable, e.g., crop acreages of leading agricultural products have been only roughly approximated, and estimates of aggregate food production are unreliable. This chapter will not attempt to survey the heterogeneous production techniques or to describe the annual routine of the farmer; its purpose is the presentation of quantitative and qualitative material that will shed light on such questions as the price responsiveness of primary producers, the effects of land tenure on investment decisions, the rationality of shifting cultivation, and the role of the government in stimulating agricultural production.

A. General Information

The agricultural sector of the Sierra Leonean economic system, like that of most tropical African countries, constitutes the largest sector of the economy in terms of contribution to national income and employment. As noted earlier, sectorial breakdowns of national income and full population census figures are not yet available, but most observers estimate that over 50 per cent of the national income is derived from the agricultural sector and that 80 per cent of the people secure their primary support from the

soil.[1] The majority of the farmers are engaged in so-called subsistence production (a term which will be used for lack of a better substitute).[2] These farmers produce primarily for their own consumption, although almost all farmers practice some form of cash cropping. Farms are small by Western standards, the average farm probably not exceeding five or six acres;[3] mechanical- or animal-powered cultivation is virtually nonexistent;[4] and cultivation as practiced in most areas involves only a minor disturbance of the top two or three inches of soil with a hand hoe after the land has been "brushed" with felling axes, pickaxes, and cutlasses.[5] The use of commercial fertilizers is unknown in a land where agricultural techniques have remained essentially unchanged over the past fifty years.[6]

Perhaps the ~~best~~ and most succinct description of agricultural techniques in Sierra Leone was made by William O. Jones when he attempted to generalize for all tropical Africa:

> Farming methods in tropical Africa, with certain notable exceptions such as in the Sudanese Gezira, differ little from those pursued cen-

1. See, for example, Hubert Childs, *A Plan of Economic Development for Sierra Leone* (Freetown: Government Printer, 1949), p. 6, and Carney, *Ten-Year Plan,* p. 13. The figure quoted for agricultural employment has been given a rather sacrosanct position in postwar literature. However, confirmation of any figure is impossible until more complete results of the 1963 census of population and the 1965 census of agriculture are available.

2. George Dalton attempts to differentiate between subsistence and peasant economies in his recent paper, "The Development of Subsistence and Peasant Economies in Africa," *International Social Science Journal,* XVI (1964), 378–389. He refers to a subsistence economy as one characterized by the lack of a market for either factors of production or final products.

3. K. L. Little, *The Mende Upland Rice Farmer* (mimeographed, n.d.), chap. ii and *The Mende of Sierre Leone: A West African People in Transition* (London: Routledge and Kegan Paul, 1951), chap. 3. A preliminary sample of 317 farms in four of the twelve provincial districts yielded an average upland rice farm of 4.51 acres, with a range of from 0.60 to 13.76 acres (taken from notes of the Agricultural Division of the Central Statistics Office). Since mixed cropping is practiced and the above estimate refers only to upland rice production, the average would be slightly larger than the indicated figure.

4. In the sample of farms mentioned in the preceding footnote, no draft animals were discovered and only two tractors were found, both owned by the government. The United Nations, Food and Agriculture Organization, *Production Yearbook,* 1963 (Rome, 1964), indicates that only 129 tractors were in use in 1963 (p. 189).

5. See the descriptions of agricultural implements and techniques in Little's works cited above.

6. C. J. Piggott discusses the use of fertilization techniques and research in "The Maintenance of Fertility in Sierra Leone," *Transactions of the Sixth International Congress of Soil Science* (Paris, 1956), Vol. D, pp. 213–216.

turies ago, and to western eyes appear primitive in the extreme. Fields are small irregular patches in the bush or forest, imperfectly cleared before burning because of the lightness of axes and knives that are the standard implements, cultivated only by hoes and frequently weedy, and containing a mixture of crops planted in what appears to be completely random disorder. Irrigation and fertilizer use are rare, mechanical or even draftpower is uncommon, and the area each family cultivates is small.

After three or four years in cultivation, the field is usually abandoned to natural growth, and may not be cultivated again for 15 to 20 years. When perennials such as cocoa or coffee are grown the same practices are engaged in: natural forest trees are left scattered about the clearing so as to provide shade for economic trees, and food crops are planted among young trees to provide some return from the land while waiting for cocoa or coffee to come into bearing. Even the experienced observer cannot always distinguish garden plot from bush or abandoned clearing.[7]

B. Agricultural Production

Basic data related to the agricultural sector are exceedingly crude and unreliable as a result of three distinct but not unrelated factors: (1) the lack of a comprehensive survey of the agricultural sector, (2) the extensiveness of subsistence farming, and (3) the practice of mixed cropping.[8] The first factor is the most basic constraint confronting the researcher, since all data for the agricultural sector, with the exception of data related to tonnage and price of agricultural exports, may contain a substantial degree of error. Yet, even if a full-scale agricultural census were taken, it is doubtful that highly reliable results could be obtained. As Ray Bodin recently pointed out,

7. W. O. Jones, "Food and Agricultural Economies of Tropical Africa," *Food Research Institute Studies,* II (Feb., 1961), 8.

8. Mixed cropping is a system of interspersing food crops in the same field. Random planting of various crops tends to prevent the erosion and leaching of cultivated land by providing a green cover to the land throughout the crop season as the crops mature at different times (*ibid.,* pp. 8–10). Waldock, Capstick, and Browning have observed over nineteen subsidiary crops growing in "rice" fields (*Soil Conservation,* p. 20). If these crops were interspersed with the rice crop in orderly rows, the estimating problem for the enumerator would be reduced. The random plantings require complete enumeration of sample areas within fields if accurate estimates are to be made.

Conditions at this time do not warrant an attempt to process a conventional type agricultural census in the near future. Agriculturalists lack knowledge about measurement units for land or volume of crops and in addition, there are such problems as those of tenure, social structure, irregular fields that are ill defined and inaccessible, intercropping, and others that would plague administrative efforts to complete a worthful census.[9]

Furthermore, the traditional reluctance of peasant farmers to answer questions limits the usefulness of a full census. As a recent report emphasized, "They, like prisoners in dock, are always afraid that anything they say will be used in evidence against them."[10]

Agricultural production in Sierra Leone may be classified into two categories with minimal overlap, though the categories are not mutually exclusive: (1) export production (palm kernels, kola nuts, ginger, coffee, benniseed, and piassava) and (2) subsistence production (rice, corn, millet, sorghum, beans, peas, cassava [manioc], vegetables, meat, eggs, and bananas). Tables 7 and 8 present the agricultural export figures by value and tonnage for the period from 1950 to 1963, and Tables 9 and 10 provide tonnage estimates for domestically consumed foods from two different sources. Regardless of whether value or tonnage is the measure, palm kernels are the major agricultural export of Sierra Leone. Over the fourteen-year period, palm kernel exports accounted for one-half to three-quarters of the value of all agricultural exports and at least 75 per cent of the tonnage of all agricultural exports. The tables also reveal that the exported tonnage of every agricultural product, with the exception of cocoa and coffee, peaked either in the 1930's or the very early 1950's. The 1963 output of palm kernels was 35 per cent below the output in 1950; palm oil and rice have ceased to be exported; piassava exports were 8 per cent lower than in the peak year of 1951; and exports of kola and ginger have been reduced 60 and 82 per cent, respectively, from their peak levels. As a result, the tonnage of

9. Ray Bodin, "Sierra Leone: Improvement of Agricultural Statistics and Market Potential for United States Agricultural Products" (Washington, D.C.: United States Department of Agriculture, mimeographed, July, 1964), p. 7.

10. Sierra Leone, Ministry of Trade and Industry, "Need for Agricultural Credit" (Freetown: mimeographed, n.d.), Appendix A, p. 8.

Table 7. *Agricultural exports for selected years: 1950–64 (£ thousands and percentage of total value of agricultural exports for each commodity)*[a]

Commodity	1950	1951	1953	1955	1957	1959	1960	1961	1962	1963	1964
Palm kernels	2,278	4,450	4,260	2,510	2,253	3,176	2,917	2,438	2,452	2,451	2,435
	(66.3)	(69.2)	(76.2)	(56.4)	(66.5)	(59.8)	(61.3)	(61.5)	(61.2)	(59.2)	(48.1)
Palm oil	105	261	27	1	1	1	1	1	0	0	0
	(3.1)	(4.0)	(0.5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Cocoa	117	526	453	741	386	702	696	464	751	587	568
	(3.4)	(8.0)	(8.1)	(16.6)	(9.7)	(13.2)	(14.6)	(11.7)	(18.7)	(14.2)	(11.2)
Coffee	39	0	333	373	896	985	649	596	309	653	1,361
	(1.1)	(0)	(6.0)	(8.4)	(22.5)	(18.5)	(13.6)	(15.0)	(6.0)	(15.8)	(26.9)
Kola	106	182	136	212	103	112	150	99	81	79	147
	(3.1)	(2.8)	(2.4)	(4.8)	(2.6)	(2.1)	(3.2)	(2.4)	(2.0)	(1.9)	(2.9)
Ginger	564	772	245	357	100	103	73	81	146	89	160
	(15.6)	(11.7)	(2.6)	(8.0)	(2.5)	(2.9)	(1.5)	(2.0)	(3.6)	(2.1)	(3.2)
Piassava	225	283	193	254	248	235	273	285	245	271	355
	(7.4)	(4.3)	(3.5)	(5.7)	(6.2)	(4.4)	(5.7)	(7.2)	(6.1)	(6.5)	(7.0)
Total agricultural exports	3,437	6,577	5,590	4,454	3,988	5,315	4,960	3,965	4,005	4,178	5,063
Agricultural exports as a percentage of total exports	51.6	66.8	47.6	44.9	26.8	32.4	18.4	15.8	24.1	16.4	15.1

a. The percentage figure is given in parentheses below the value figure.
Sources: Sierra Leone, *Trade Report* (Freetown: Government Printer), 1950–63, and *Sierra Leone Trade Journal,* 1965/66.

Table 8. *Agricultural exports for selected years: 1950–64 (thousands of tons and percentage of total agricultural tonnage for each commodity)*[a]

Commodity	High	1950	1951	1953	1955	1957	1959	1960	1961	1962	1963	1964
Palm kernels	1936	71.3	75.1	68.9	57.6	53.0	57.5	54.5	57.5	61.0	53.0	52.2
	1952	(83.8)	(81.7)	(75.7)	(81.7)	(82.2)	(79.5)	(77.1)	(79.3)	(81.2)	(79.2)	(74.3)
Palm oil	1930	1.9	3.2	0.4	0	0	0	0	0	0	0	0
	1951	(2.2)	(3.5)	(0.3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Cocoa	1962	1.6	1.8	1.6	2.2	2.0	2.6	3.3	2.8	4.7	3.2	3.1
		(1.9)	(1.9)	(1.8)	(3.1)	(3.1)	(3.6)	(4.7)	(3.8)	(6.3)	(4.8)	(4.4)
Coffee	1960	0.3	0	1.1	2.1	2.0	2.6	3.3	2.8	4.7	3.2	3.1
		(0.4)	(0)	(1.2)	(3.0)	(5.9)	(6.8)	(7.2)	(6.9)	(2.3)	(5.8)	(8.4)
Rice	1963	1.6	1.7	13.3	1.5	0	0	0	0	0.4	0	0
		(1.9)	(1.0)	(14.6)	(2.1)	(0)	(0)	(0)	(0)	(0.4)	(0)	(0)
Kola	1951	1.1	1.5	1.2	1.1	0.7	0.7	1.4	1.0	0.9	0.6	1.0
		(1.3)	(1.6)	(1.3)	(1.6)	(1.1)	(1.0)	(2.0)	(1.4)	(1.2)	(0.9)	(1.4)
Ginger	1951	2.3	3.3	1.9	1.7	0.7	1.5	0.6	0.6	0.5	0.6	0.7
		(2.7)	(3.6)	(2.1)	(2.4)	(1.1)	(2.1)	(0.8)	(0.8)	(0.7)	(0.9)	(1.0)
Piassava	1951	5.0	6.1	2.6	4.3	4.3	5.1	5.8	5.7	5.2	5.6	7.1
		(5.9)	(6.6)	(2.9)	(6.1)	(6.7)	(7.1)	(8.2)	(7.8)	(6.9)	(8.4)	(10.1)
Total tonnage		85.1	92.7	91.0	70.5	64.5	72.3	70.7	72.9	75.1	66.7	70.3

a. The percentage figures are stated in parentheses beneath the value figures.
Sources: Sierra Leone, *Trade Report,* 1950–63, and *Sierra Leone Trade Journal,* 1965/66.

Table 9. *Volume of production, acreage, and yields for domestically consumed agricultural products during selected years*

	Area (000 acres)				Yield (metric tons per acre)				Production (000 metric tons)			
Commodity	1948/49–1952/53	1960/61	1961/62	1962/63	1948/49–1952/53	1960/61	1961/62	1962/63	1948/49–1952/53	1960/61	1961/62	1962/63
Corn	20	32	32	32	.4	.3	.3	.3	8[a]	9	9	9
Millet	25	17	17	17	.6	.7	.7	.7	15[b]	12	12	12
Sorghum	25	20	20	17	.7	.6	.6	.6	17	12	12	12
Sweet potatoes and yams	10	7	7	7	.9	1.3	1.3	1.3	9	9	9	9
Cassava	35	50	50	50	1.0	1.1	1.1	1.1	36	56	56	54
Peanuts	22	30	30	32	.3	.2	.2	.3	7	7	7	8
Rice, paddy	783	652	652	650	.4	.4	.4	.5	274	264	264	315

a. Average of 3 years.
b. Average of 2 years.
Source: Sierra Leone, Ministry of Natural Resources. The figures are rounded-off versions of those g'ven to FAO for its *Production Yearbook.*

Table 10. *Volume of agricultural production for selected years*

Commodity	1952 53 1954 55	1960 61	1961 62	1962 63	1963 64	1964 65	1965 66
	(000 metric tons)						
Corn	9	12	10	10	10	10	10[a]
Millet and sorghum	31	29	28	28	29	29	29[a]
Rice, paddy	357	441	562	484	500	504	479[a]
Beans and peas	1	1	1	1	1	1	1[a]
Cassava (manioc)	312	422	431	442	451	460	460[a]
Peanuts, unshelled	7	5	6	6	5	5	5[a]
Bananas and plantain	127	145	149	151	154	157	160[a]
Other fruit	26	30	30	31	31	32	n.a.
Vegetables	31	35	36	37	38	38	n.a.
Meat	5	5	5	5	5	5	n.a.
Eggs	2	2	2	2	2	2	n.a.
Sweet potatoes and yams	59	57	51	53	53	59	59[a]

a. Estimate of United States, Department of Agriculture, Economic Research Service.

Sources: United States, Department of Agriculture, Economic Research Service, *Indices of Agricultural Production in 28 African Countries* (Washington, D.C.: USDA ERS, 1964), Table 25; United States, Department of Agriculture, Economic Research Service, *The Africa and West Asia Agricultural Situation: Review of 1965 and Outlook for 1966* (Washington, D.C.: Government Printing Office, 1966), p. 80.

agricultural exports has fallen 28 per cent since 1951. Correspondingly, the value of agricultural exports has declined 37 per cent during the same period, and the value of agricultural exports as a percentage of the value of all exports has decreased from 66.8 per cent in 1951 to 12.2 per cent in 1963. Sierra Leone is now the only West African country whose agricultural exports are less than 50 per cent of the value of all exports.[11] The internal structure of agricultural export production has also shifted since 1950. Palm kernels have retained their dominant position with little change, but cocoa and coffee have become the most important subsidiary

11. Liberia, with its large shipments of iron ore, is the only other West African country which even approaches the 50 per cent level. Agricultural exports as a percentage of total exports for the years 1958, 1959, and 1960 were, respectively, 71.6, 50.8, and 50.1 per cent. Other representative West African countries had the following percentages for the same three years: Ghana, 79.9, 83.4, and 82.7 per cent; Gambia, 87.7, 90.4, and 100 per cent; and Nigeria, 93.8, 92.9, and 89.5 per cent (United Nations, Food and Agriculture Organization, *Trade Yearbook*, 1961, XV, Rome, 1962, p. 8).

exports, replacing kola nuts, ginger, rice, and palm oil. The position of piassava has remained relatively unchanged.

Various explanations have been offered for the absolute decline in agricultural exports,[12] such as: the migration of some 50,000 to 100,000 Sierra Leoneans to the diamond fields in the mid-1950's, the migration of farmers and farm workers to urban centers, the fall in world agricultural prices, and, more especially, the pricing policies of the Sierra Leone Produce Marketing Board (SLPMB). Undoubtedly, the outflow of perhaps 10 per cent of the farm labor force explains part of the absolute decline,[13] but it will be contended in Chapter 3 that the pricing practices of the SLPMB were of equal importance in retarding the growth of agricultural export production since 1950.

The decline in the agricultural export sector does not appear to have carried over into the subsistence sector. Estimates from two different sources indicate that increases in the production of the basic staples, rice and manioc, have occurred since the early fifties, while the output of subsidiary food crops such as maize, millet, sorghum, beans, peas, meat, eggs, sweet potatoes, and yams has remained relatively unchanged. The United States Department of Agriculture Economic Research Service (USDA/ERS) estimates show a 41 per cent increase in the production of rice from the early fifties to the present and a 47 per cent increase in the output of manioc over the same period. The Sierra Leone Ministry of Natural Resources (SLMNR) reports a much lower output level of manioc than the USDA/ERS but agrees that the output of manioc has doubled since the 1948/49–1952/53 period.[14] It should be noted, however, that both estimates give yield

12. The very sharp reduction in the relative position of agricultural exports is due primarily to the rapid expansion of the output of diamonds and iron ore since 1951. See chap. iv.

13. The migration of labor out of the agricultural sector should increase the productivity of labor, assuming that it is not redundant, i.e., its marginal productivity is not equal to zero, which would tend to offset somewhat the absolute decline in agricultural output. The decrease in output will depend upon the elasticity of the productivity curves over the relevant range. For a discussion of the zero marginal productivity hypothesis in the context of Indian agriculture, see Morton Paglin, " 'Surplus' Agricultural Labor and Development: Facts and Theories," *American Economic Review*, LV (Sept., 1965), 815–834.

14. The magnitude of the difference between the two estimates gives some indication of the difficulties encountered by the researcher. The USDA/ERS estimates are based on five weeks of field work done in 1963 by Ray Bodin, former

figures which appear to be out of line with the earlier estimates of Waldock, Capstick, and Browning. They estimated manioc yields for various farming and soil conditions as follows:

Pure crop—good land	15 tons per acre
In rice farms	2–4 tons per acre
Pure crop—over-farmed land	1–2 tons per acre[15]

The estimates of the SLMNR give an aggregate yield of one ton per acre, which seems low when compared with other West African countries, while yields inferred from the USDA/ERS estimates in excess of eight tons per acre appear uncommonly high.[16]

Similarly, the USDA/ERS annual estimates of rice production unexplainably exceed those of SLMNR by 50 to 75 per cent, and the two estimates show disproportionate percentage increases over the past decade, i.e., 41 per cent for the USDA/ERS figures during the period 1952/53–1964/65 versus 15 per cent for the SLMNR estimate during the period 1948/49–1962/63. If data concerning the relative amounts of swamp rice and upland rice produced were available, the discrepancies between the two sets of data might be explained, but no attempt to separate rice estimates into these two categories has ever been made.[17] The only

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state agricultural statistician for Minnesota, while the SLMNR estimates are independently derived through the efforts of its own field workers. The glaring discrepancies in the two sets of data relate to manioc and rice production. The USDA/ERS previously used the Sierra Leonean estimates, but a letter from Snider W. Skinner, agricultural economist of USDA/ERS, to the author indicates that USDA/ERS deviated from Sierra Leonean figures because of the field work of Ray Bodin and because of the construction of food balances for African and West Asian countries. The department felt that Sierra Leone's level of nutrition was about equal to that of neighboring countries. With specific reference to cassava, Skinner wrote: "While we make no claim that our cassava estimate is accurate to the last thousand tons, we do believe it has considerable validity," whatever that means.

15. *Soil Conservation*, p. 38.

16. Aggregate average manioc yields from other representative African countries are as follows: Liberia, 3 tons per acre; Nigeria and former British Cameroons, 3.8; Ghana, 3.2; former French Guinea, 2.0; Gambia, 1.6; Ivory Coast, 1.9; and Niger, 1.7. These figures were computed from statistics given in W. O. Jones, *Manioc in Africa* (Stanford, Calif.: Stanford University Press, 1959), p. 164.

17. Upland rice is grown on the basis of shifting cultivation without the use of manure or other fertilizers, while swamp rice is continuously cropped with the fertility of the land being maintained by the deposits of silt from river water. Recent experiments with superphosphate, however, reveal that rice yields in the boliland swamps can be maintained with the aid of this fertilizer (Sierra Leone, *A Progress Report on Economic and Social Development, April 27, 1961–March 31, 1965*, Freetown: Government Printer, 1965, p. 6). The possibility of restoring the fertility of upland soil through the application of commercial fertilizers has not yet been adequately examined.

available figures show that in 1956 the acreage devoted to swamp rice absorbed approximately 10 per cent of all rice land, yet because of the higher yields obtainable from swamp rice (1,400 pounds versus 600 pounds per upland acre), the 80,000 acres of swamp land produced 56,000 tons of paddy rice or about 25 per cent of all rice grown in Sierra Leone during that year.[18] Current estimates of the division of rice land between the two varieties of rice are unavailable, but the rice statistics presented in Table 9 (which show an absolute decline in the total rice acreage since 1952, yet an increase in the tonnage produced) suggest that swamp rice acreage has increased relative to upland rice acreage.

The available evidence thus indicates increased production over the past decade of the staple foods consumed in Sierra Leone. Whether this augmented rice and manioc production has permitted greater caloric intake by the majority of the inhabitants of that country (excluding food imports) is uncertain without verification of previous estimates of both population and food production.[19] The Economic Research Service reports that per capita caloric intake increased from 2,390 per day for the 1956–58 period to 2,410 in 1959–61, protein intake rose from 37.5 grams per person per day to 39.7 over the same period, but fat intake decreased from 52.7 to 51.9 grams per person per day.[20] While these per capita food intakes are below the standards set by the Food and Agriculture Organization of the United Nations (FAO), one cannot conclude that Sierra Leoneans are undernourished.[21] Study of man's food requirements is at best incom-

18. These acreage figures were first reported by Waldock, Capstick, and Browning, *Soil Conservation*, p. 18. In 1957 in a mimeographed paper prepared as background material for D. T. Jack, who later issued a report of his work in Sierra Leone, the same figures were used. However, they purported to represent the latest year, 1956 (see Sierra Leone, "Economic Situation in Sierra Leone, November, 1957," Freetown: mimeographed, 1957, p. 2).

19. The USDA/ERS estimates that per capita food production has declined from an index number of 100 in 1952/53–1954/55 to 96 in 1964/65 (*Indices of Agricultural Production in 28 African Countries*, Washington, D.C.: Government Printing Office, 1964, Table 25).

20. United States Department of Agriculture, Economic Research Service, *Food Balances for 30 Countries in Africa and West Asia, 1959–61* (Washington, D.C.: Government Printing Office, 1965), p. 30. Estimated caloric, protein, and fat intake for other representative West African countries for the 1959–61 period are 2,430, 38.8, and 53.8, respectively, for Liberia; 2,400, 45.8, and 49.1 for Guinea; 2,450, 51.3, and 43.8 for Nigeria.

21. See FAO, *Nutritional Studies*, "Calorie Requirements" (No. 5, 1949) and "Protein Requirements" (No. 15, 1957).

plete and depends upon numerous variables such as age, sex, work, and climate.[22] Determination of nutritional needs in Sierra Leone would require detailed sample surveys of specific communities over long periods of time. Such surveys have not yet been made. Current investigations indicate, however, that previous studies have overestimated food requirements and underestimated food intakes, thus demonstrating the need for more scientific work in this area.[23]

C. Shifting Cultivation

The restoration of soil fertility through the technique of shifting cultivation was almost universally condemned per se until the past decade. Agronomists generally recognized that shifting cultivation effectively replaced the nutrients necessary for plant growth, but the belief that the system of bush fallow was inefficient persisted.[24] Efficiency was conceived, however, only in terms of the destruction of primary forests or erosion, and alternative costs were seldom if ever considered. The antagonists' viewpoint may be summarized by quoting FAO's objections to shifting cultivation:

> 1. The fallow, which restores soil fertility, is identical with natural vegetation which remains outside human control, outside the possibility of human control . . . .
> 2. Therefore, soil and forest reserves are being wasted by bush fires, erosion, and other factors.
> 3. Man is never induced to intensify his agriculture, nor to proceed with long-term improvements of the land.
> 4. Having to move periodically, he does not accumulate any material wealth.

22. See Colin Clark and Margaret Haswell, *The Economics of Subsistence Agriculture* (London: Macmillan, 1964), chap. i, "Food Requirements."
23. *Ibid.*
24. No distinction between "bush fallow" and "shifting cultivation" will be made here. The UNESCO Commission on World Land Use would like to restrict the term shifting cultivation to the actual movement of settlements at frequent intervals. However, when it is realized that a family or clan often moves to a new or expanding settlement or that settlements themselves are moved not only when the land is worn out but also when the houses become dilapidated, then little reason for the distinction remains.

5. Beyond a certain critical limit, the density of population cannot increase as, at the approach to this limit, all the soil becomes degraded and famine redisperses the population.

6. . . . cultivators have to remain at subsistence level, without professional differentiation, without exchange or specialization, i.e., without any possibilities of progress.

7. Cash crops intensify the destructive aspects of shifting cultivation.[25]

In another publication, FAO condemned shifting cultivation as "the greatest obstacle in tropical countries, not only to the immediate increase of agricultural production, but also to the conservation of the production potential for the future, in the form of soils and forests."[26]

The purpose of this section is to examine shifting cultivation in Sierra Leone in light of these criticisms.

1. *Description of Shifting Cultivation*

Shifting cultivation in Sierra Leone involves the annual "brushing" of a "new" patch of secondary bush and other forms of vegetation followed by the burning of the cleared, dry bush which restores nutrient elements to the soils in the form of carbonates, phosphates, and silicates of the cation.[27] The burning fails, however, to restore the carbon, nitrogen, or sulphur contained in the litter; these elements are lost in the burning process but are not destroyed in the soil humus.[28] After the burning, the land is free of weeds and more friable. The soil directly under the burn may be somewhat damaged if the heat is very intensive, but the addition of the nutrient elements outweighs this adverse effect. After the burn has been completed, the operations of seeding, weeding, and harvesting are carried out in succession; then the land is generally allowed to revert to bush.[29] In certain crowded

25. Food and Agriculture Organization Staff, "Consequences of Shifting Cultivation," *Tropical Agriculture*, XXXIV (July, 1957), 160.

26. FAO Staff, "Shifting Cultivation," *Unasylva*, V (1952), 10.

27. P. H. Nye and D. J. Greenland, *The Soil under Shifting Cultivation* (Farnham Royal, Eng.: Commonwealth Agricultural Bureaux, 1960), p. 67.

28. *Ibid.*, p. 73. It should also be noted that except for the localized effects of the burn, the destruction of humus by fire is almost nil.

29. The reversion to bush is aided by the fact that stumps and saplings are only cut down; their roots are not removed and the fire does not permanently damage either the roots or the segments left standing above the ground.

areas where the period of bush fallow has fallen to a very low level (five years or less), the land may be used for two or three years in succession. Should the land be used two or more years in a row, cassava, groundnuts, or other cereal crops are usually grown in place of rice. In northern Sierra Leone, where neither forest nor secondary bush is available, savannah or grass fallow farming is practiced, but grass fallow farming is generally considered to be less desirable than bush fallow. Farming under this system is basically the same except that fewer nutrient elements are restored to the land through burning. Yields are consequently lower on this type of land, e.g., yields on first-year bush fallow range from 400 to 1,200 pounds per acre versus 300 to 800 on first-year grass fallow.[30] After the land has been cropped for the desired number of years, the reversion to bush allows the soil to return to its "natural" fertility through the accumulation of nutrients in both the vegetation and the top soil.

forced-idle land

2. *Economics of Shifting Cultivation*

The native farmer of Sierra Leone and other practitioners of shifting cultivation have evolved the most effective method yet devised for the maintenance of soil fertility and the control of weed growth under tropical conditions.[31] The Sierra Leonean farmer, like his counterparts in other regions of Africa, was confronted with a soil which rapidly lost its fertility when cropped, a scarcity of manure or other types of fertilizers, a lack of extensive export markets, and a limited number of tools. Population was scarce and land plentiful; and the farmer reacted quite rationally by substituting land for labor and capital and by farming extensively rather than intensively. The depletion of soil fertility, even

30. Waldock, Capstick, and Browning, *Soil Conservation*, pp. 21, 22.

31. The literature on shifting cultivation has grown to vast proportions in recent years. One of the best bibliographies on the subject is contained in H. C. Conklin, *The Study of Shifting Cultivation*, Studies and Monographs, Vol. VI (Washington, D.C.: Pan American Union), 1963. Material which supports the conclusions of this section can also be found in such works as Montague Yudelman, *Africans on the Land* (Cambridge, Mass.: Harvard University Press, 1964); E. R. Leach, "Some Economic Advantages of Shifting Cultivation," *Proceedings of the Ninth Pacific Science Congress*, VII (1959), 64–66; Hugh Popenoe, "The Influence of the Shifting Cultivation Cycle on Soil Properties in Central America," *ibid.*, pp. 72–77; and Nye and Greenland, *Soil under Shifting Cultivation*.

when extensive farming prevailed, necessitated the costly operation of brushing new land every year, but this was less costly than the alternative of adding fertilizers which were not readily available.[32] The villager was not concerned with conserving the forests,[33] for the lack of a ready market for timber, except in coastal areas, meant that he would never receive any benefits from lumbering. However, the trees were valuable as a source of nutrients for the tropical soil, and the farmer exploited this possibility to its fullest extent. His decision cannot be considered myopic, but rather it should be seen as a rational assessment of his own economic prospects. In certain instances, shifting cultivation led to deforestation and erosion, but again the farmer decided that the costs of preventing the destruction of forest and soil far exceeded the benefits that could be derived, so long as there existed a plentiful supply of forest or sufficient secondary bush. Had he been restricted from migrating to these areas, then undoubtedly he would have altered his cultivation methods.[34]

Opponents of shifting cultivation must realize that without some forest destruction, farming would hardly be possible. The question involved is not the complete preservation of the forest and the soil, but the optimal use of both resources. Under conditions of population pressure on the land, i.e., a high or increasing population density, the optimal uses of the two resources are very

32. K. L. Little studied twelve separate Mende farming communities in Sierra Leone, and he reports that an average-sized farm of about six acres requires approximately 100 man-hours to brush and clear eight- to ten-year-old bush. The remaining operations (excluding bird scaring) require approximately 200 hours. Thus, about one-third of the total farm work devoted to the production of food or subsistence crops is consumed in the clearing operations each year (*Mende Upland Rice Farmer,* chaps. ii–iv).

33. Nye and Greenland state: "The attitude of a shifting cultivator to the soil is quite different from that of a farmer in a less spacious environment. The system of shifting cultivation is not designed like the Norfolk 4-course rotation, to preserve or improve the soil for posterity—that is an attitude to land which evolves when there is no more room to expand and personal ownership of land is established. Nowhere when there is plenty of land available do farmers attempt to achieve maximum yields on a given patch, regardless of the effort involved" (*Soil under Shifting Cultivation,* p. 129).

34. J. D. Freeman, in *The Iban of Sarawak* (London: Colonial Office, 1953), describes a rather destructive system of shifting cultivation. The government attempted to preserve the virgin forest by restricting population movements, but the Iban discovered that when the fertility of their soil was almost exhausted, the government would open new forests to them. However, the Iban modified their system in other parts of Sarawak where virgin forest no longer existed.

different from a situation in which the population is sparse and widely scattered. The system only becomes inefficient when the opportunity costs of alternative uses of the land exceed the present and future benefits that can be derived from shifting cultivation. In other words, "the villagers' preference for shifting cultivation is not due to conservatism or stupidity but to perfectly correct assessment of their own economic condition."[35] These people are not "economic lunatics" but "intelligent people who, given their special circumstances, are acting in an economic way."[36] In addition, the literature on Sierra Leone emphasizes that the people have a definite preference for the taste of upland rice over swamp rice; under these special demand conditions, the decision to employ shifting cultivation becomes even more rational.

A final factor in assessing the rationality of shifting cultivation is the risk element. Shifting cultivation in Sierra Leone and in other countries has supported large populations for centuries, and certain civilizations such as the Maya and Ashanti have attained high levels of social organization and culture through utilization of this farming technique. The results of continuous cropping, however, are largely unknown, and the Africans' desire for security, like that of other peoples, is paramount.[37] As Montague Yudelman has stated: "This overriding traditional emphasis on security [*N.B.* Westerners desire security as well but we have become more accustomed to the workings of the market place] helps to explain the lack of specialized production, why all producers tended to grow the same staple crops regardless of agronomic conditions or comparative advantages."[38] In other words, until it has been demonstrated to the African that a superior method of

35. E. R. Leach, "Some Economic Advantages of Shifting Cultivation," p. 65.

36. *Ibid.* Leach further notes that in North Borneo "it was noticeable that in areas of very low population density where land was plentiful, shifting cultivation was always the preferred technique; efforts by the government to persuade the population to adopt fixed agriculture were almost completely futile. On the other hand wherever the local population density was high so that land was scarce, terraced agriculture is the standard, traditionally established, preferred technique" (*ibid.*).

37. In addition to the problems of the maintenance of soil fertility, there exists a controversy over the initial fertility of the tropical soils. See Pierre Gourou, *The Tropical World* (London: Longmans, Green, 1961), chaps. iii–iv, and H. Vine, "Is the Lack of Fertility of Tropical African Soils Exaggerated?" *Proceedings of the Second Inter-African Soils Conference,* I (Brussels, 1954), 389–412.

38. Yudelman, *Africans on the Land,* p. 99.

cultivation exists, he will continue to use established cultivation methods which have prevented starvation in the past.[39] This security-mindedness is especially obvious with farmers in Sierra Leone who plant manioc on previously cropped land without any intention of harvesting the crop unless necessary as a means of averting hunger. This is so common that the Mende tribe of Sierra Leone has developed a special saying for such an occurrence: "The cassada saved the rice."[40] The statements above should not be interpreted to imply that Africans are averse to change; they simply mean that the risk factor involved in a change of agricultural procedures is so great that the farmers must be persuaded of the new technique's efficacy.[41] Investment variation or specialization is thus limited because of the inadequacy of the returns when risk is taken into account and not necessarily because of the particular cultivation techniques practiced.

This section has not considered the equally important question of whether the prevailing system of shifting cultivation will remain economically rational in the future when population growth forces the period of bush fallow below tolerable limits.[42] The answer to such a question is an empirical one depending upon the costs of modifying the existing system versus the benefits to be derived. Should it become technologically possible to crop continuously without endangering soil fertility, the benefits of import substitution might outweigh the costs of such substitution. However, without knowledge of supply functions, comparative advan-

39. Waldock, Capstick, and Browning state, "In addition he [the Sierra Leonean farmer] has little incentive to do so, as his margin between success and failure is so small that he dare not try any new ideas" (*Soil Conservation*, p. 12).

40. Little, *The Mende of Sierra Leone*, p. 307. "Cassada" is Creole for cassava.

41. Yudelman notes that "once producers have obtained adequate food supplies or planted a large enough acreage to meet their needs, then, in some instances, prices do play a role in resource allocation. Economic values may reassert themselves. . . . Economic forces also tend to come into play to a much greater degree after harvesting than before planting" (*Africans on the Land*, p. 100). The problem with this statement is that Yudelman ignores the risk factor to which he previously alluded. The economic factor of risk conditions the farmers' entire behavior; they do not plant irrationally and harvest rationally.

42. It is difficult to estimate what these tolerable limits are. Waldock, Capstick, and Browning estimate that the "normal" crop periods are one and a half years and fallow periods are eight years. They define excessive as fallow periods less than five years (*Soil Conservation*, p. 23). Many areas are reported near the five-year limit, so changes in farming techniques may come about in the near future.

tages, and so forth, it is not possible to be more precise about the future rationality of shifting cultivation.

In summary, the traditional system of shifting cultivation permitted a rather sparse population working with few capital goods to achieve a form of "ecological balance with its environment."[43] The native farmer not only restricted weed growth but allowed the fertility of the soil to be restored.[44] "Provided the fallow does not fall below a limit which varies with soil and climatic conditions, shifting cultivation can be continued with safety. In fact a more effective system of maintaining fertility in the tropics has yet to be evolved."[45]

D. Land Tenure

1. *Existing Patterns of Land Tenure in Sierra Leone*

a. ***The provinces.*** The Protectorate Lands Ordinance of Sierra Leone distinguishes three categories of land rights which are recognized by native law and custom: landownership, landholding, and land occupation. In addition, there are special individual rights to economic tree crops which are recognized only in customary law. The Sierra Leone government reserves the term "landownership" to the residual and ultimate title of the Tribal Authorities (the paramount chief and his council) to the land. These authorities hold the land in trust for the tribal communities concerned and perform administrative duties such as the allocation and control of the land. The extent of the administrative duties differs widely from community to community depending upon the usufructuary rights recognized by customary law in the area under consideration. These usufructuary rights are somewhat het-

43. Yudelman, *Africans on the Land,* p. 13.

44. One of the prime reasons land is allowed to revert to bush is the arduous task of weeding. The farmer tends to abandon a plot when the cost of weeding the land exceeds the returns of clearing a new patch. Where land is abundant, the infestation of weeds need not be great before it is profitable to clear new land. See Nye and Greenland, *Soil under Shifting Cultivation,* pp. 76–81.

45. Waldock, Capstick, and Browning, *Soil Conservation,* p. 23.

erogeneous even within similar tribal groupings; however, for taxonomic purposes the following broad classifications are usually distinguished:[46] completely communal, semicommunal, family, and individual usufructuary rights.

Communal rights appear to prevail in areas where land is least scarce. The communal rights are vested with the Tribal Authorities so that landowning and landholding become merged;[47] but anyone within the community can farm where he desires as long as no other tribal member has indicated he wishes to farm the same land. "Strangers"[48] may obtain land by paying appropriate "shakehands" to the paramount chief and/or other interested individuals and by observing customs and practices of that community. No boundaries exist between village lands within the chiefdom under this system, and only minor tribes in Sierra Leone currently practice completely communal usufructuary rights. Other minor tribes have adopted a semicommunal tenure system. Land boundaries now exist between villages but not within villages. Those wishing to farm outside their village limits must obtain permission and must usually pay a small fee.

46. See for example the groupings adopted by Waldock, Capstick, and Browning, *ibid.*, pp. 15–17, and M. H. Hussain, *Report to the Government of Sierra Leone on Customary Land Tenure in the Context of a Developing Agricultural Economy* (Rome: Food and Agriculture Organization, 1964), pp. 4–6.

47. The relationship of the paramount chief to the land is dichotomous. He is overlord of the tribal land but not its owner—the land belongs to the community per se; the chief must use the land on exactly the same terms and conditions as other members of the chiefdom. He has no right to dispossess any landholder without cause; i.e., "a person or his family may be severely punished or fined for various offenses; but, except for actual banishment, there is no way in which they can be legally denied access to their land" (K. L. Little, "Land and Labour among the Mendes," *Journal of African Affairs,* XLVII, March, 1948, 26). The chief, in conjunction with his council, may make rules concerning farming procedures; he may "beg" land on the same terms as his neighbors; but he may not alienate either tribal or individual land.

48. The term "stranger" denotes an outsider; someone who does not belong to the tribal community. The term also connotes a dependency relationship. Strangers possess secondary tenure rights until they have become "permanent" settlers through living in the community as long as the "living memory." Primary tenure rights derive from either initial settlement of the land or conquest. Secondary rights and primary rights generally merge after one or two generations of settlement, although certain minor distinctions may continue to be made. For further elaboration of this point, see Dorjahn and Fyfe, "Landlord and Stranger: Change in Tenancy Relations in Sierra Leone," pp. 391–397; K. L. Little, "Land and Labour," pp. 23–31; and M. McCullock, *Peoples of Sierra Leone Protectorate* (London: International African Institute, 1950), pp. 66–68.

The most common form of usufructuary rights in the former Protectorate is that of family[49] landholding practiced by the two major tribes, the Mende and the Temne, and other minor groupings. Under this system, the head of the family controls and allocates the land, a right that is patrilineally passed down to eldest brother or eldest son.[50] Among the Temnes, inertia toward fragmentation of landholdings exists as the husband or head of the family normally makes a separate farm for each wife, and children may lay claim to their share of the farm worked for or by their mother. Any member may lay claim to a part of the family land, if he wishes to farm the land, regardless of how long he has been away from the land.

Since no land in the provinces may be sold, individual ownership appears to be coterminous with the above landholding rights. In certain areas, such as cleared mangrove swamps or land in close proximity to urban centers, certain additional minor rights may be distinguished, but ownership in the Western sense is not encountered in the former Protectorate.

Usufructuary rights of a secondary nature may be obtained by "begging" land[51] from landholders within a given chiefdom, town, or village; by moving to a "strange" community; or through purchase of pledges or leases.[52] In many cases, pledging appears to be used as an extricative device to evade the restrictions on outright sale of land, rather than as a stopgap measure in times of financial emergency.[53]

Landholding rights in the Protectorate apparently originated with first cultivation, settlement, or conquest. In most chiefdoms these rights are never extinguished, while in some chiefdoms

49. The extent of this grouping may vary from the very large extended family to the immediate family of a man and his wife.

50. K. L. Little gives an excellent account of the Mende system in *Mende Upland Rice Farmer,* chaps. iii–iv.

51. Payment made for temporary use of land.

52. Pledges are a transfer of usufructuary rights to land as security for a loan of money. No explicit interest is paid since the pledge obtains use of the land until the money is paid back. Leases are designed to enable non-natives to obtain use of land since alienation of the land is forbidden by law without the governor's expressed consent.

53. In a later part of this section, it is contended that customary law and restrictions are plastic when they are overridden by economic considerations. The phenomenon above corroborates this point.

primary usufructuary rights may be obtained from original settlers through transfer or gift. In other chiefdoms, abandoned farm lands or temporarily leased land worked for twenty years becomes the "property" of the new cultivator.

Economic tree crops are treated somewhat differently. Whoever plants the trees is regarded as the owner, though he may have no rights over the land on which they were planted. When the owner harvests the fruit of such trees, he is expected to pay the landholder a "right-bone" in recognition of the landholder's rights. However, the palm tree is an exception, since it is considered to be a natural growth in which no personal property rights exist. Only the people of the area in which the trees are growing may gather their fruit.[54]

b. *The Western Area.* In the former Colony, usufructuary rights to the land evolved on a more traditional English basis; after treaties with the indigenous tribes ceded the whole of the Colony area to the Crown, the original non-native settlers were granted freeholds. In 1909, the Crown Lands Conservancy Ordinance (Cap. 53) reaffirmed the rights of the Crown to all land not granted to the original settlers and specifically forbade the destruction of trees on Crown land; however, the ordinance was not strictly enforced, and large areas of the Colony were settled by both native and non-native squatters. As a result, two other types of land tenure have evolved. The first type allows those people living in undisturbed occupancy for twenty years to lay claim to a freehold under the Undisturbed Land Ordinance (Cap. 253). The second and most common type of tenure involves Crown land which is presumed to be unoccupied but which is nevertheless "permanently" settled. The government's claim to the land would be disputed under the Unoccupied Lands Ordinance should the government attempt to reassert its rights.[55] Thus it

54. Improved varieties of palm trees planted in plantations do not, of course, fall in this category. For a further discussion of ownership of economic trees, see Lord Hailey, *Native Administration in British African Territories* (London: H.M. Stationery Office, 1951), III, 232, and C. K. Meek, *Land Law and Custom in the Colonies* (London: Oxford University Press, 1946), pp. 27–31.

55. The failure of most landholders to claim a freehold under the Unoccupied Lands Ordinance indicates either the security of their tenure or high costs of registering their land relative to the benefits to be derived.

appears that residents of the former Colony possess more secure claims to their land than occupants of the former Protectorate, but for all practical purposes, removal of a long-term inhabitant from any particular piece of land in Sierra Leone is impossible without just cause and some form of compensation.

2. *Economic Consequences of the Existing Patterns of Land Tenure*

Land tenure in various countries has received detailed attention because of its alleged economic, social, and political consequences. The social and political consequences will not be dealt with in this subsection, and only investment patterns will be discussed under economic consequences.

Traditional land tenure arrangements in underdeveloped countries, where private ownership of land does not exist, are often cited as a partial explanation of the "deficiency" of investment in agriculture.[56] Tenurial relationships are said to retard investment in traditional agriculture through the following mechanisms: (1) insecurity of expectations, (2) non-availability of credit, and (3) prevalence of customary restrictions on land use.[57] Each of these alleged restraints on investment will be discussed in turn. The premise centering upon the insecurity of expectations typically contains three subpremises: (*a*) farmers hesitate to undertake investment if a clear title to the land does not exist, (*b*) farmers fear compensation will not be forthcoming on permanent improvements to the land, and (*c*) the time period of operation is

56. Two recent articles concerning the economic effects of land tenure in Northern Africa illustrate the "traditional" viewpoint. Anthony Bottomley, in an investigation of Tripolitania agriculture, concluded that common ownership of the land inhibited investment in projects involving the land, thus preventing the equalization of marginal social and private products. He further states that his analysis applies in most areas where land is held in common and attributes of private ownership are denied ("The Effect of the Common Ownership of Land upon Resource Allocation in Tripolitania," *Land Economics*, XXXIX, Feb., 1963, 91–95). William Zartman, writing in the same journal, concludes that "communal ownership, either public or tribal, encourages frozen patterns of exploitation that are both backward and uneconomic" ("Farming and Land Ownership in Morroco," *ibid.*, pp. 187–198).

57. See, for example, the arguments put forth by Pedler, *Economic Geography of West Africa*, p. 215, and P. Dorner, "Land Tenure, Income Distribution and Productivity Interactions," *Land Economics*, XL (Aug., 1964), 250–251.

uncertain without a written lease. Close examination of land rights in Sierra Leone indicates that none of the subfactors would inhibit agricultural investment. In the first place, a clear title to ownership of the land is unnecessary where usufructuary rights to land acquire the permanent status that they have in Sierra Leone.[58] A man who cannot be deprived of his rights to the use of his family's land as long as he does not violate the laws or customs of the chiefdom need not feel insecure in regard to his land-rights. K. L. Little indicates the tenacity with which Mende farmers hold their land, in the following statement:

> An individual who acquires land by inheritance enjoys a complete set of rights over it which are qualified only by the interest which his nearest of kin have in the matter, and by his relation to the (Paramount) Chief who . . . is the official "caretaker" of all lands in the chiefdom. He has right to the free uninterrupted use and usufruct of it, to build houses and plant trees on it, to hunt game and catch fish, to cut timber, to grow what crops he likes, and generally to use the land in any way which does not contravene the laws and customs of the chiefdom . . . . Such rights are continuous, and the land passes down the family in the patrilineal line . . . . [It passes] traditionally [to] his eldest brother in first instance, then his eldest son.[59]

In regard to point (*b*) above, traditional African law appears to recognize the rights of the individual or the family to improvements made upon the land. This feature is indicated in the following passage: "In African eyes, the man who plants or builds on land he is lawfully occupying is commonly regarded as owning the improvement. There may be restrictions on his right to alienate; but even if he is ejected from occupation his rights in the improvements would terminate only if unlawful use of that improvement itself was the cause of ejection."[60] Thus, it would appear that investment in agricultural projects by individual farmers or

58. See pp. 51–53. Disputes between land claimants do arise and must be handled by the appropriate court, and occasional injustices occur where the proper tribal authorities actually forget or are bribed to forget pertinent facts regarding usufructuary rights. Such disputes, however, normally arise only in cases where land has been pledged, begged, or borrowed.

59. "Land and Labour," p. 24.

60. C. W. Rowling, "An Analysis of Factors Effecting Changes in Land Tenure in Africa," *Special Supplement to the Journal of African Administration*, IV (Oct., 1952), 21–28.

families is not deterred by insecurity of land tenure rights or by the lack of provisions to compensate farmers for permanent improvements to their land should the farmer be forced off the land by one means or another.[61] In fact, the present system of landholding in Sierra Leone undoubtedly provides an excessive amount of security, for the inability of farmers to alienate their land[62] through direct sale prevents them from obtaining credit from the commercial banks.[63] Little information exists concerning the saving habits of the Sierra Leonean farmer, but it seems very likely that most farmers' average propensity to save is quite low—perhaps less than 5 per cent of yearly income.[64] The supply side of the investment process would thus appear to be greatly restricted by the traditional usufructuary rights while the demand side is largely unaffected. The apparent failure of the land tenure system to shift the demand curve for investment funds down and to the left, however, does not say anything about the level of the demand curve. Recent revision of economists' thinking on this point and past writing of others outside the discipline indicate that the level of the demand for investment funds is relatively low. There are two reasons for suspecting a low level of demand

61. In personal conversations with various officials of the Sierra Leone government, the writer was struck by the lack of concern over the land tenure problem. David Carney, former economic advisor to the government, dismissed the entire issue in one statement: "It's not a problem." Jacob Davis, chief agriculturalist, and S. A. Jabati, manager of the Sierra Leone Produce Marketing Board, expressed similar points of views, except that both emphasized that the present land tenure system did restrict the flow of funds to the agricultural sector because land could not be mortgaged.

62. L. P. Mair offers an interesting and cogent explanation of why the right to alienate land is not found in many parts of Africa: "the absence of any motive for its exercise" ("Modern Developments in African Land Tenure: An Aspect of Cultural Change," *Africa*, XVIII, July, 1948, 184). Moreover, he noted that "there are not many recorded cases where someone who was invited to dispose of land for a profitable consideration has invoked such principles [ancestral spirits, custom, etc.] as a ground for refusal. . . ." The intensive competition for cocoa land in West Africa and the new forms of land rights that are emerging are excellent illustrations of this point.

63. Jacob Davis has recently stated: "Because of the land tenure system, and the cultural methods adopted by Sierra Leone farmers, it has been extremely difficult, if not impossible, for farmers to obtain credit from banks to invest on their lands" (*Development Plan of the Agricultural Services of Sierra Leone*, Freetown: mimeographed, 1964, p. 12).

64. Howard J. Kumin's study, *Report to the Government*, indicates that the only ostensible saving which occurred within the sample of households studied resulted from the acquisition of durable goods. In 1961, this amounted to only 2.3 per cent of the total income of the households under consideration (p. 63).

for agricultural investment funds: (1) the extensive rather than intensive use of the land and (2) the lack of profitable investment opportunities. Africans are frequently castigated for failing to improve their land and for lacking a sentimental attachment to the land, but this apparent deficiency stems not from their mental or cultural attributes but from their "living in the continent where populations are scarce and land most plentiful."[65] The restoration and improvement of the soil through the use of commercial fertilizers and advanced agricultural techniques is a very costly method of restoring soil fertility when compared with the cheapness of "bushing" a new farm where land is plentiful.

In regard to the second factor affecting the demand for investment funds, it would seem that Schultz's hypothesis is applicable.[66] Schultz's hypothesis cannot be explicitly tested within the contexts of Sierra Leonean agriculture, but evidence does seem to verify his conclusion that "once there are investment opportunities and efficient incentives, farmers will turn sand into gold."[67] The price responsiveness of primary farmers—to be examined in Section C—indicates a substantial amount of substitution between cash crops, exhibiting the economic reactions of farmers to changing investment opportunities. The growth of acreage devoted to swamp rice cultivation and the adoption of mechanical cultivation techniques by large numbers of farmers are further indications of their willingness to invest in profitable operations. As C. W. Rowling has noted, "Where something which if offered to the farmer has been shown to pay, he will not turn up his local

65. G. B. Masefield, "Farming Systems and Land Tenure," *Special Supplement to the Journal of African Administration*, IV (Oct., 1952), 12. Masefield further relates the story of a Buganda agricultural officer rebuking an old farmer for allowing his land to deteriorate; the old man merely replied, "Why . . . when I was a young man I went out to work for a few years and saved enough money to buy a farm. My son can do the same. . . ." He concludes that the moral of this story is that "private ownership of land is an incentive to its improvement only in a society where land is scarce" (p. 8). This idea applies equally well to a society such as the one in Sierra Leone where landholding rights closely approximate private ownership and land is very plentiful relative to both labor and capital.

66. T. W. Schultz, *Transforming Traditional Agriculture* (New Haven, Conn.: Yale University Press, 1964). Schultz argues basically that net investment in many underdeveloped countries is low because of the high price of additional income streams. In other words, the rate of return on agricultural projects is not so high as was sometimes assumed. Working within a given state of technology, the traditional farmer has approached his investment decision in a rational manner.

67. *Ibid.*, p. 5.

leviticus and reject it because the law-giver tells him to do so."[68] Thus, the economic consequence of the land tenure system in Sierra Leone seems to be a restriction of the supply of funds flowing into the agricultural sector, not a restriction of the demand for such funds. The level of the demand for investment funds is best explained by other factors such as the profitability of investment opportunities and the extensive use of the land by farmers.

E. The Price Responsiveness of Primary Producers in Sierra Leone

The response of primary producers in Sierra Leone to price changes of agricultural products has never been explicitly studied.[69] Throughout the literature relating to agriculture in Sierra Leone, one encounters various impressions and opinions concerning this topic, but these impressions have not been subjected to statistical testing. For example, Gerald T. Rimmington recently noted that in certain villages of southeastern Sierra Leone, cocoa has displaced kola nut production as a result of relative price changes. He states:

> At Ndablama, for instance, encouragement was given to large-scale planting of kola after the end of the intertribal wars during the final decade of the nineteenth century. When cocoa began to bring greater

68. "An Analysis of Factors Effecting Changes in Land Tenure in Africa," p. 25. Hans Cory, an agricultural officer in Tanzania, is quoted as saying that "an African will shed the older customary values very easily . . . once new economic opportunities and values grip him" (Guy Hunter, *The New Societies of Tropical Africa,* London: Oxford University Press, 1962, p. 70).

69. There have been a number of attempts in recent years to measure the price responsiveness of primary producers in underdeveloped countries. See: Robert M. Stern, "The Price Responsiveness of Primary Producers," *Review of Economics and Statistics,* XLVIII (May, 1962), 202–207, "The Price Responsiveness of Egyptian Cotton Producers," *Kyklos,* XII (Fasc. 2, 1959), 375–384, and "Malayan Rubber Production, Inventory Holdings, and the Elasticity of Export Supply," *Southern Economic Journal,* XXXI (April, 1965), 314–324; W. O. Jones, "Economic Man in Africa," *Food Research Institute Studies,* I (May, 1960), 107–134; Francis Chan Kwong Wah, "A Preliminary Study of the Supply Response of Malayan Rubber Estates Between 1948 and 1959," *Malayan Economic Review,* VII (Oct., 1962), 77–94; P. T. Bauer and B. S. Yamey, "A Case Study of Response to Price in an Underdeveloped Economy," *Economic Journal,* LXIX (Dec., 1959), 800–805; Brij Raj Chauhan, "Rise and Decline of a Cash Crop in an Indian Village," *Journal of Farm Economics,* XLII (Aug., 1960), 663–675.

monetary reward after the end of the Second World War the older kola trees were replaced by the former. During the last decade the process was completed, and kola now has completely disappeared as a commercial crop.[70]

The literature is also replete with examples of the price responsiveness of palm oil producers. In 1949, the SLPMB established the upcountry buying price for palm oil below the prevailing domestic price. Palm oil producers, in retaliation, refused to sell their oil to the SLPMB, preferring the higher prices of the local market. The discrepancy between local and SLPMB prices has persisted to the present, with the result that Sierra Leone has not exported palm oil since the late forties. The mass exodus of Sierra Leoneans to the diamond areas during the mid-fifties further indicates the price responsiveness of the people. As new finds of diamonds occurred, an estimated 50,000 to 100,000 Sierra Leoneans left their farms and jobs to prospect, both legally and illegally, for this new source of riches.[71] Sierra Leoneans migrated to the diamondiferous areas despite the armed intervention of both the government and the Sierra Leone Selection Trust Limited, in spite of mass deportations, and in defiance of legislation enacted to restrict such movements. Since 1959 the miners have continually thwarted the governmental diamond-purchase monopoly by smuggling activities along the Guinea and Liberian borders.

The annual reports of the Sierra Leone Produce Marketing Board also give some evidence that farmers react in the expected manner to price incentives.[72] At the time of the establishment of the SLPMB in 1949, it was generally conceived by the directors of the board and the staff of the Department of Agriculture that the quality of cocoa exported from Sierra Leone was inferior to that exported from other West African countries. In order to rectify this supposed deficiency, the board established in 1949 a £37.34 per ton price differential between Grades I and IV cocoa. During

70. "Cocoa in South-eastern Sierra Leone," *Geographical Journal*, CXXVII (March, 1961), 136–137.

71. See Sierra Leone, Mines Department, *Report of the Mines Department, 1957* (Freetown: Government Printer, 1958), p. 16.

72. See SLPMB, *Annual Report of the Sierra Leone Produce Marketing Board* (London: Waterlow), for the years 1949 through 1955.

the 1951/52 cocoa crop season, the differential was increased to £84 per ton but was later reduced to £58 per ton for the 1953/54 season. The apparent result of the price differential was to reduce the export of Grade IV cocoa from slightly less than 50 per cent of total cocoa exports in 1949 to less than 5 per cent for the 1953/54 season. Finally in late 1954, the board became so convinced of its success in restricting the export of Grade IV cocoa that it eliminated Grade IV cocoa from its buying lists. Similar but less drastic differentials were established between Grades I and III cocoa. By 1957 over 90 per cent of the cocoa exported by the SLPMB was of Grade I quality.[73]

The opposite conclusion, that farmers react perversely to price changes, is widely held, however, even to the extent that the pricing policies of the statutory marketing board appear to be founded on negatively sloped supply curves.[74]

Those authors holding the viewpoint that farmers react perversely to price changes normally attempt to justify their position by stating that farmers possess either a fixed or a target level of living or money income. Such a viewpoint is implied by the annual report of the Department of Agriculture for 1957. This report states that "the majority of farmers have yet to regard oil palm as a crop. They exploit wild palms only if there is no other way of supplementing the budget and as a result efforts to distribute better high yielding types [of oil palm] have met with very disappointing results."[75]

Other opinions, both pro and con, concerning the price responsiveness of farmers in Sierra Leone could be cited; but enough has been said to indicate that rival hypotheses flourish side by side and that objective assessment of the underlying functional rela-

73. SLPMB, *Annual Report of the Sierra Leone Produce Marketing Board, 1957*, pp. 1–2. A similar result in the case of Nigerian cocoa has been noted by P. T. Bauer and B. S. Yamey ("A Case Study of Response to Price in an Underdeveloped Economy," pp. 800–805). They were also able to note changes in the marketing of various agricultural crops whenever higher or lower prices were announced or generally anticipated. This phenomenon undoubtedly occurs in Sierra Leone but two factors prevent its observance: the lack of monthly purchase figures and the infrequency of price changes except immediately before the new crop season.

74. In an interview with the author, S. A. Jabati, managing director of the Sierra Leone Produce Marketing Board, vigorously defended the position that farmers in Sierra Leone react perversely to price changes. (The pricing policies of the SLPMB will be discussed more fully in chap. iii.)

75. Sierra Leone, *Report of the Department of Agriculture, 1957*, p. 2.

tionships is difficult to establish. It appears, however, that most of the rival hypotheses derive from conflicting preconceptions concerning policy matters or from special interests. The purpose of this section is to step back from policy considerations and to examine statistically the loosely supported opinions mentioned above.

a. ***Note on Methodology.*** There are two methods of obtaining supply curves, both of which are laden with conceptual problems.[76] One might attempt, at a given moment, to construct various commodity supply curves for individual farms from statistical data relating to the costs of production at different levels of output. This approach, which holds constant the stock of capital of the individual farms, approximates the Marshallian short-run supply curve when the individual supply curves are aggregated over all farms. However, even if the conceptual problems could be overcome, the practicality of this approach is limited by the lack of both the data and the time necessary for such computations. A simpler (statistically if not conceptually) and more generally used method of estimating supply curves is through the use of time-series data. Aggregate amounts of specific crops or "agricultural output in general" are used in conjunction with average prices per unit of time to fit a regression line to the observed data where quantity of output is the dependent variable and price the independent variable. The time-series approach is at present the only feasible method of estimating agricultural supply curves in Sierra Leone and has been adopted for the following analysis.

Before turning to the assumptions underlying the analysis, note should be taken of several theoretical difficulties involved in a time-series approach.[77] At any one point in time, price variations may lead to both long- and short-run adjustments in output. For

76. See, for example, E. J. Working, "What Do Statistical 'Demand Curves' Show?" *Quarterly Journal of Economics*, XLI (Feb., 1927), 212–235; Milton Friedman, *Price Theory* (Chicago: Aldine Publishing Co., 1962), pp. 31–33; and J. M. Cassels, "The Nature of Statistical Supply Curves," *Journal of Farm Economics*, XV (April, 1933), 378–387.

77. For a more complete discussion see Marc Nerlove, *The Dynamics of Supply: Estimation of Farmers' Response to Price* (Baltimore: Johns Hopkins Press, 1958); Wah, "A Preliminary Study," pp. 77–94; and Glenn L. Johnson, "Supply Function—Some Facts and Notions," in E. O. Heady, ed., *Agricultural Adjustment Problems in a Growing Economy* (Ames, Iowa: Iowa State College Press, 1958), pp. 74–95.

example, an increase in the price of a specific agricultural commodity may lead to greater intensity of work in the short run, while the long-run adjustment may take the form of an increase in planted acreage. As a result, the observable responses to price changes vary with the functional formulation of the regression equation, depending on whether output or acreage is functionally related to price. In addition, the response to a price variation will not normally take the form of a once-and-for-all change in acreage planted, equipment used, or even hours worked, and these adjustments will be unevenly distributed over time. Thus, when such lags occur, changes in output attributable to price changes may not be observed, or output changes may be spuriously related to price changes. The time-series approach is further complicated by the problem of estimating producers' price expectations, which may have greater influence on producers' decisions than current price.[78] Depending upon the elasticity of price expectations, output may either increase or decrease in subsequent years, regardless of current prices, to the extent that producers tend to base their production decisions on "what they expect price to be when their output will be on stream rather than on current price."[79]

One further limitation, applicable to the quantity and price ratios used in several regression equations of this study, should be noted. Relative price and quantity ratios may move in opposite directions as a result of exogenous changes in governmental policies and/or institutions or crop failures. In addition, even though both numerator and denominator may move in the same direction, large changes in the denominator may swamp changes in the numerator with the result that quantities and prices again move in opposite directions.

b. ***Assumptions.*** In order to make the analysis manageable, the following assumptions will be made:

78. For an elaboration of different techniques of estimating producers' price expectations, see Marc Nerlove and Kenneth L. Bachman, "The Analysis of Changes in Agricultural Supply: Problems and Approaches," *Journal of Farm Economics,* XLII (Aug., 1960), 531–554, and subsequent articles in the same journal.

79. Wah, "A Preliminary Study," p. 80.

1. There has been no change in technology in the primary sector either in terms of inputs or outputs.
2. There have been no intrasector resource movements either between geographic regions or between farms.
3. The degree of risk is unchanged.
4. There has been no redistribution of asset ownership as a result of governmental action, capital accumulation, or inflation or deflation.
5. The prices established at upcountry buying stations by the Sierra Leone Produce Marketing Board are the prices actually received by the primary producers.
6. As a consequence of assumptions one through four, yields of the various agricultural products are unchanged; all changes in outputs result from additional acreage planted or variations of the percentage of total acreage harvested.
7. Weather has not influenced yields.

These assumptions, in effect, reduce the supply "shifters" to a minimum and allow us to proceed as if supply conditions are unchanged. In other words, changes in price and quantity of output are the result of shifts in the demand curves of the various commodities under investigation, not shifts in the supply curves. Such assumptions are, of course, not realistic, but they do allow us to test several simple hypotheses with the available data.[80] Our model will undoubtedly attribute to price changes certain variations in quantities actually "caused" by factors not specified by the model; but data limitations preclude their inclusion.

3. ***The hypothesis.*** The hypothesis to be tested is that farmers in Sierra Leone respond to price changes through variations in the

80. It should be noted, however, that these assumptions may not overly distort reality. For although yield changes per acre in Sierra Leone have not been quantified, their magnitude should not be overestimated. The reasons for minimizing the magnitude of yield variations can be summarized as follows: agricultural procedures have hardly varied since the beginning of the twentieth century; the "typical" farmer applies no fertilizer to his land and uses few if any improved varieties of seeds or seedlings; and the instruments used in "brush farming" have scarcely changed over the past seventy-five years. Thus, if yields have varied over time, the changes may be largely attributed to amelioration or deterioration of climatic, weather, and soil conditions.

quantity of output supplied. The hypothesis will be accepted if the coefficient of correlation between price and quantity is significant at the .05 level of probability. If the coefficient of correlation is not significant at the .05 level, this hypothesis will be rejected and the alternative hypothesis that farmers do not respond to price changes will be accepted.

d. ***The procedure.*** Data for prices and quantities of various agricultural products of Sierra Leone have been taken, in most cases, from the records of the Sierra Leone Produce Marketing Board. The board publishes annual figures regarding its operations, which include the quantities of agricultural products purchased from farmers, total quantities exported, and the prices paid at upcountry buying stations by commissioned agents of the board. Since the board has a statutory monopoly for the export of almost all the major agricultural products of Sierra Leone and since domestic consumption of the exported commodities is relatively small, the purchases of the board closely approximate the total output of these "commercial" crops.[81] Ideally, the prices used in the computation of the regression equation should be the prices paid to producers, but no information exists as to the difference between the established upcountry buying and actual prices paid to producers.[82] No machinery exists for guaranteeing that the buying agents pay the official prices, and many of the farmers appear to be unaware of the meaning or significance of the established prices.[83] However, competition among the buying

81. During the early fifties, the Department of Agriculture's annual reports stated that "large" quantities of coffee were being smuggled into Liberia in order to escape the low prices established by the SLPMB relative to the prices prevailing on the world market. Coffee was dropped from the list of statutory products controlled by the board in 1953, in part because of these illicit activities. There are no other indications that agricultural products have been or are currently being smuggled out of the country to elude the pricing policies of the board. Once again one sees in such activities the response of Sierra Leoneans to price differentials.

82. Buying agents purchasing produce at locations other than officially established buying centers are allowed to deduct transportation costs from the point of purchase to the nearest official buying center from the established purchase price. For a more detailed discussion of differences between the board's minimum price and that paid by the traders, see Petch, *Report on the Oil Palm Industry of Sierra Leone* (Freetown: mimeographed, n.d.), pp. 118–120.

83. B. O. Nnorom, *Sierra Leone Produce Marketing Board and Agricultural Development since 1949* (Freetown: Fourah Bay College, mimeographed, 1964), pp. 34–35. Nnorom also notes that many farmers are totally unaware of the existence of SLPMB.

agents tends to assure that prices approximating the minimum buying prices established by the board are in fact being paid.[84] Although the use of official buying prices as an approximation of prices paid to producers presents certain difficulties, no better alternatives exist. Neither wholesale prices F.O.B. Freetown nor export prices are adequate substitutes. Thus, unless otherwise stated, prices or adjusted prices will refer to upcountry buying prices.

In examining the price responsiveness of Sierra Leonean farmers, the following basic relationship or variations on this relationship will be used:

$$Q_t = a + bP_{t-1}$$

where P_{t-1} represents the lagged average annual price of a specific commodity or a price ratio of two or more crops and Q_t is the output for the given year of a specified commodity or a ratio of the tons of output of two or more commodities. In almost every case, both variables will be expressed in logarithms in order to provide a direct measure of the elasticity of quantity with respect to price.

CASE I. The effects of current year prices of palm kernels on the quantity of palm kernels supplied

all over - omnipresent

The wild palm tree is ubiquitous in Sierra Leone. The trees are rather evenly distributed over the country, and improved varieties of palm trees are virtually nonexistent except on the recently established plantations of SLPMB. The fruit of the tree may be harvested either by climbing the tree, which gives the best yield of palm oil, or by picking up the residue of fallen fruit. The nut inside the pericarp of the palm fruit is then cracked with stones by women and children either in their "idle" moments or during the rainy season when other work is impossible. The palm kernel

84. Petch, in *Report on the Oil Palm Industry*, remarks, "I am inclined to think that such fair dealings as people are receiving from the traders is not so much the result of the mechanism of the Marketing Board prices as the result of the increasing competition in trade. Lebanese traders . . . in competition with each other" (p. 119). Petch's view is not widely held in Sierra Leone, and it fails to consider that tacit collusion may exist among the various traders. Nevertheless, the viewpoint cannot be entirely discounted, especially when an increasing number of Sierra Leoneans are entering the industry.

Table 11. *Tonnage and prices of palm kernels for selected years*

Year	Quantity[a] (tons)	Price[b] (£ per ton)	Year	Quantity[c] (tons)	Price[d] (£ per ton)	Price[e] (£ per ton)
1922	49,029	11.75	1950	64,766	28.90	43.85
1923	59,545	15.00	1951	75,854	28.90	37.77
1924	61,117	15.75	1952	75,870	28.90	33.47
1925	63,231	15.50	1953	69,525	31.65	33.57
1926	65,000	14.00	1954	68,562	31.65	32.95
1927	65,436	14.10	1955	57,445	31.65	29.79
1928	67,105	14.90	1956	58,100	28.90	28.06
1929	20,205	11.80	1957	52,899	28.90	25.58
1930	56,641	8.90	1958	53,694	28.90	27.01
1931	54,462	5.50	1959	57,444	28.90	26.51
1932	77,162	6.60	1960	57,442	28.90	28.99
1933	64,083	4.90	1961	58,710	31.60	27.96
1934	68,655	3.70	1962	62,582	31.60	28.47
1935	78,019	6.00	1963	54,024	27.40	27.20
1936	84,578	9.00				
1937	76,776	9.70				
1938	63,697	5.50				
1939	69,747	4.40				

a. Export figures.
b. Average wholesale export prices F.O.B. Freetown.
c. Purchases of the SLPMB.
d. Upcountry buying station prices.
e. Upcountry buying station price deflated by Prices Index constructed for different years by the Labour Department of the Sierra Leone government.

Sources: Petch, *Report on the Oil Palm Industry*, p. 62; SLPMB, *Annual Report*, 1949–63; Sierra Leone, *Blue Book* (Freetown: Government Printer, 1920–32).

industry is characterized by a lack of heavy, fixed investments.

Under the conditions described above, one would expect that palm kernel producers would be highly sensitive to current prices, and more particularly to relative prices. The statistical evidence presented below indicates that the tonnage of palm kernels offered for sale is correlated with current prices but that farmers react somewhat inelastically with respect to price changes. The raw data concerning average prices and yearly output are presented in Table 11. The results of the regression analysis run on the data in Table 11 are listed in Table 12.

An attempt was made, for purposes of comparison, to include the earliest available statistics of prices and quantities for palm

Table 12. *Regression equations, coefficients of determination, coefficients of correlation, and standard errors of the estimates for tonnage of palm kernels regressed on current prices during selected years*

Years	Regression equation	Coefficient of determination	Coefficient of correlation[a]	Standard error of the estimate	Confidence interval for $P = .05$ for the elasticity of supply
1. 1922–30	$Q = \frac{1}{.2234 - 4.2369 \cdot 10^{-6} P}$	.488	.698	.013	
2. 1931–39	$\log Q = 4.7017 + .2069 \log P$	.530	.726	.029	.284 to .140
3. 1950–62	$\log Q = 4.9086 - .9507 \log P$	.239	.490	.052	.241 to −.431
4. 1950–62	$\log Q = 3.8936 + .6019 \log P$*	.543	.737	.035	.948 to .256
5. 1950–62	$\log Q = 4.3939 + .3226 \log P$†	.669	.816	.096	.866 to −.243

a. The correlation coefficients of Equations 1 and 2 are significant at the .05 level, and those of Equations 4 and 5 at the .01 level. The coefficient of correlation of Equation 3 is significant only at the .10 level.
* Upcountry buying station prices deflated by a consumer price index.
† Price of palm kernels divided by the price of cocoa.
Source: Table 11.

kernels. Data for the period 1922–39 were found which yielded the following regression equation:[85]

$$\log Q = 4.74142 + .05870 \log P\,.$$

Q is output in tons per year and P is the average price per year in pounds sterling. Examination of the coefficient of correlation indicates that this relationship is not significant at either .05 or .01 levels of probability. However, graphic depiction of the data seems to indicate that a shift in the supply function of palm kernels occurred shortly after the beginning of the Depression of 1929. The overall time series was thus segmented into two periods, 1922–30 and 1931–39, and the results form the first two lines of Table 12. In the relationship for 1922–30, it is evident that current price is an important determinant of output, almost 50 per cent of the variation in output being explained by price variation. The elasticity of supply is not directly available from the formula used,[86] but varies between .015 and .005 for outputs in the 50,000–75,000-ton range. Thus it appears that supply reacted very inelastically to price changes during the time period under consideration. During the succeeding time period, 1931–39, the quan-

85. Data for both the World War I and II periods were available, but were excluded because of distortions induced by the war.
86. The double log formula when fitted to the data is significant at the .10 level but not the .05 level of probability. The elasticity of supply using this formula is .029.

tity supplied still reacts inelastically to price changes but the elasticity of supply appears to have increased. If a confidence coefficient of 0.95 is used, the elasticity coefficient falls between .28 and .14. Producers therefore seem to have been more conscious of price movements in the later period than in the earlier period.[87]

The third equation in Table 12 indicates that during the fifties producers reacted perversely to price changes. It must be remembered, however, that during this time span prices paid to producers were controlled by the Sierra Leone Marketing Board and that the board pursued a policy of infrequent price changes with regard to palm kernels. Prices were varied on only four different occasions during this thirteen-year period, and these variations were modest. A clearer picture of the price responsiveness of Sierra Leonean farmers may be gained by deflating the controlled producer price by a consumers' price index, thus approximating the "real" price received by palm kernel producers for each year in question.[88] In other words, it is hypothesized that the relevant price upon which producers base their production decisions is the "real" price as opposed to the purely "monetary" price. Incorporating the adjusted price data with the previously used quantity data yields the fourth equation of Table 12. This equation reveals that the price elasticity of supply for the period since 1949 now lies between .26 and .95 and that price has played a slightly greater role as a determinant of output than in the previous periods. Although the observed price elasticity of supply does not exceed unity, the evidence does not support allegations that palm kernel producers react perversely to price changes. But the regression does indicate that if the elasticity of supply is .6, then a

87. There is no necessary relationship between the correlation coefficient and the elasticity of supply. A "high" correlation coefficient is not necessarily associated with a "high" elasticity of supply.

88. The price index used for deflating controlled prices is inadequate for several reasons. First and most important, three separate indexes were used by the Labour Department during this period, and no satisfactory method of linking the three series exists. The weights used in constructing the index are not available in all cases, and categories have been added or dropped. Second, the method used to collect price data for the first two series appears to have been inadequate, and it is not known whether the procedure has been corrected for the current series (see Kumin, *Report to the Government*, pp. 1–15). The method employed to reconcile the indexes must be considered inadequate at best.

1 per cent change in price will on the average result in an output variation of approximately 360 tons per year.

Since the board has changed palm kernel prices infrequently and since the price index used in the fourth equation is admittedly somewhat inadequate, an attempt was made to compare the above estimates with an estimate of the price responsiveness of Liberian palm kernel producers. One would expect that Liberian reactions to price changes would closely approximate Sierra Leonean reactions since the palm areas of the two countries lie in close proximity and tribal groupings are similar. By using the data for the period 1950–60 contained in an article by Robert Cole,[89] the following regression was derived:

$$\log Q = 3.7 + 1.1 \log P \,.$$

This regression shows a larger response to price changes than was observed for Sierra Leone, 1.1; and since the confidence intervals for the two estimates overlap, there is no significant difference between the two estimates. Thus, the true price elasticity of supply for Sierra Leonean palm kernels may in fact exceed unity for the period since 1950.

The final equation of Table 12 relates the quantity of palm kernels purchased by SLPMB to the price of palm kernels divided by the price of cocoa. Relating the quantity of palm kernels to the ratio of palm kernel and cocoa prices admittedly does some violence to reality, since the two products are not directly competitive in all parts of Sierra Leone. However, the two crop areas are congruent enough to allow meaningful comparison. From Equation 5 of Table 12, it appears that a larger proportion of the variation in the output of palm kernels is explained by the variation of relative prices than in the previous cases. The elasticity measurement is not comparable with the aforementioned cases, but it is evident that relative price changes do affect the production of palm kernels in Sierra Leone.

89. "Traditional Agricultural Exports: Sources and Markets," in *Economic Survey of Liberia* (Evanston, Ill.: Northwestern University Press, 1963), Article No. 7, p. 10-A. The coefficient of determination is .52 and the coefficient of correlation is .72, which is significant at the .05 level. At the 0.95 level of probability the coefficient of elasticity lies within the interval between 1.7 and .4.

In conclusion of Case I, it appears that a positive correlation exists between the output and price of palm kernels. Furthermore, the regressions indicate that the price elasticity of supply is increasing over time, thus reflecting the growth of economic alternatives and the growing awareness of these alternatives. The observed elasticities are, of course, reflections of the data used and the methods employed in estimating these coefficients. A more dynamic approach, were the data available, might reveal a much higher response to price changes.[90] However, even though the observed elasticities do not exceed unity, except for the Liberian estimate, a 1 per cent change in price will result in "large" changes in quantity supplied; e.g., if the price elasticity of supply is 1, then on the average a 1 per cent change in price will result in a 600-ton output change.

Case II. *The effects of price changes on the output of cocoa*

The production of cocoa in Sierra Leone is a comparatively recent phenomenon. The first exports of this crop were not made until the late 1920's and only modest gains in output were made before 1945. Following World War II, when the shipping lines were cleared and the price of cocoa more than tripled, substantial increases in output occurred. The present section examines the Sierra Leonean response to these postwar price changes. Table 13 sets forth the relevant data concerning the total output of cocoa purchased by SLPMB per year and the price paid to producers at upcountry buying stations, and the results of the regression analysis on the time-series data are shown in Table 14. Equation 1 of Table 14 relates current output to the previous year's price. Since cocoa prices cannot influence the number of pod-bearing cocoa trees in the short run, this relationship was formulated in anticipation that the previous year's price might affect the intensity with which cocoa producers work their crops. It is well known that a

90. See the dynamic models developed in Marc Nerlove and William Addison, "Statistical Estimation of Long-Run Elasticities of Supply and Demand," *Journal of Farm Economics*, XL (Nov., 1958), 861–880. They show that static approaches to elasticity measurements for 20 United States farm commodities yield elasticities greater than 1 in only one case. However, when a dynamic model was employed the estimated elasticities for 10 commodities moved above 1.

Table 13. *Producer prices and quantities sold: 1950–63*

Year	Agricultural substitutes: Quantity[a]	Agricultural substitutes: Price[b]	Cocoa: Quantity (tons)	Cocoa: Price[c] (£)
1950	n.a.[d]	n.a.[d]	1,592	73.6
1951	n.a.[d]	n.a.[d]	1,973	123.0
1952	12.85	32.11	1,993	148.6
1953	12.79	30.27	1,546	161.7
1954	7.88	26.56	2,708	161.7
1955	7.71	21.58	2,386	211.5
1956	8.03	18.88	2,271	158.1
1957	7.31	17.64	2,046	192.6
1958	6.61	17.90	2,969	189.9
1959	5.94	18.14	2,942	179.4
1960	5.49	21.54	4,352	187.1
1961	6.28	23.30	4,988	176.1
1962	8.37	26.52	4,170	159.8
1963	n.a.	n.a.	3,340	149.4

a. Quantity of palm kernels divided by quantity of other leading agricultural exports.

b. Price of palm kernels divided by weighted, lagged price of other leading agricultural products averaged over three previous years.

c. Upcountry buying station prices. These prices are a weighted average of the four grades of cocoa produced in Sierra Leone.

d. Because of the time lags employed, data for these years are not available.

Source: SLPMB, *Annual Report*, 1950–63.

Table 14. *Price responsiveness of cocoa producers*

Year	Equation	Coefficient of determination	Coefficient of correlation[a]	Standard error of estimate	Confidence interval for $P = .05$ for the price elasticity of supply
1. 1950–62	$\log Q = 2.51466 + .40429 \log P_{t-1}$	.182	.426	.133	
2. 1949–63	$\log Q = 1.47811 + .90654 \log P^*_{t-6}$	.8961	.947	.070	1.068 to .745

a. The coefficient of correlation of Equation 2 is significant at both the .05 and .01 levels of probability. The coefficient of correlation for Equation 1 is not significant at either level.

* Price in Equation 2 is an average of the prices of the three previous years.

Source: Table 13.

minimum lag of five to six years is required for new cocoa trees to bear pods; hence, short-run changes in output must result from greater or lesser work effort, changes in the weather, control of disease, or other factors operative in the short run. Equation 1 of Table 14 does not confirm the hypothesis that the previous year's price is an important determinant of present-year output. Other

factors, such as those mentioned above, are apparently more significant determinators. The coefficient of correlation is not significant at the .05 level of probability; therefore, the null hypothesis that output is not correlated with previous year's price is accepted.

Equation 2 of the same table extends the price lag to six years and incorporates a three-year average of past prices as an approximation of the price producers "expect" to receive when their output reaches the market.[91] The regression indicates that output is highly correlated with the adjusted lagged price. According to Equation 2, the price elasticity of supply is .91, which with a confidence coefficient of 0.95 indicates that the true elasticity of supply falls between 1.07 and .75. Thus, the growers of cocoa appear to be relatively insensitive to previous-year price changes but sensitive to long-run variations in price.

Case III. Price response of Sierra Leonean farmers using relative quantities and relative prices

As the final case, an attempt was made to measure the elasticity of substitution between palm kernels and all other agricultural exports handled by the Sierra Leone Produce Marketing Board. Ideally, all crops produced by farmers including subsistence crops should have been included, but the lack of data prevented such a computation. In addition, separate estimates should have been made between palm kernels and the most important agricultural commodities, but localization of certain crops suggested a more aggregative approach. Palm kernels were used as the standard of comparison because of the ease of entry to and exit from the palm kernel producing industry and because of the wide extent of the industry. The data concerning relative quantities and prices are presented in Table 13. The denominator of the price ratio contains the average annual price of the major agricultural outputs of Sierra Leone, excluding palm kernels, weighted

91. With this approach there are only eight degrees of freedom in testing for the significance of the coefficient of correlation.

by tonnage of output per year. This price is lagged one year behind the price of palm kernels and is averaged over the prices prevailing during three previous years. The adjustment in the denominator of the price ratio was made in order to approximate the price expectations of the farmers, and the lag was included because of the gestation period between first planting and first output of the other major agricultural outputs.

The regression equation derived from the data in Table 14 is as follows:

$$\log Q = -.182 + .795 \log P$$

where Q is the quantity ratio and P is the price ratio. The coefficient of determination is .549, the coefficient of correlation is .741 (which is significant at the .01 level of probability), and the confidence interval of the elasticity of substitution is .726 to .864 at the 0.95 level. Thus, even though primary producers in Sierra Leone are not highly sensitive to absolute price changes, it does appear that there exists a substantial amount of cash crop substitution as relative prices shift over time. Were it possible to include subsistence crops in the estimate, it seems probable that the elasticity of substitution coefficient would move above unity. This conclusion stems from the fact that an absolute reduction in physical production of export crops has occurred since 1950, while the production of subsistence crops has increased. Thus, less substitution may exist among cash crops than between export and subsistence production.

Given the findings of the three cases above, there seems to be little room to doubt the price responsiveness of primary producers in Sierra Leone. Although "large" price elasticities of supply were not found, in no case were perverse producer reactions to price changes observed. In addition, it should be noted that the magnitude of the measured elasticities of supply may be understated for the following reasons: (1) the primitive nature of the data; (2) the static method employed to derive the elasticity estimates; (3) the averaging of the elasticity estimates as a result of fitting a double log function to the data; (4) the inflexibility of SLPMB's

pricing policies, which may distort price responsiveness; and (5) the fact that the period since 1950 has included many price declines, and supply curves may not be completely reversible. Nevertheless, price elasticities of supply in ranges observed above are certainly of some significance in the allocation of productive efforts over time.

F. The Role of the Government in the Agricultural Sector of the Sierra Leonean Economy

In the agricultural sector of the Sierra Leonean economy, the traditional functions of the government have been limited to research, education, and advisory services. In isolated instances, the government has directly participated in agricultural production through the provision of such services as contract plowing and swamp reclamation or through the establishment of demonstration plantations. Nevertheless, until independence was obtained, the basic tenet of agricultural policy remained that "it is *not* the *function* of the Government's agricultural services to undertake the commercial production of crops or stock in any way."[92] The policy of minimum intervention, however, has not withstood the independence of the country; and the former laissez-faire orientation no longer exists, as evidenced by the following policy statements. The first statement, taken from the *White Paper on Natural Resources Policy,* is more restrained than the second statement by Jacob Davis; but both statements emphasize the government's intention to play a more active role in the future. The *White Paper* states:

> Much solid, valuable work has been done in the past by the Department of Agriculture's research services in ascertaining the type and species of crops best suited to the peculiar and varying conditions of Sierra Leone. Much of this knowledge has been disseminated by the Department's extention services, which are, it is admitted woefully, inadequate. Hitherto the Department has confined its activities to research and advisory services and it is now felt that while the vital research work must be continued and expanded, much more money

92. Davis, *Development Plan of the Agricultural Services,* p. 6. Italics supplied.

must be spent on *switching the emphasis on advisory services to actual direct supervision of productive effort.*[93]

Jacob Davis, the chief agriculturalist, unambiguously declares:

This non-involvement of the Government in commercial production may be understandable in a setting where capital for agricultural development is available, where knowledge is widespread, and where internal and external marketing are well organized. *It is maintained that in the setting of present Sierra Leone such a relationship is unrealistic,* and suggestions are put forward in this programme of areas of activity in which it would be desirous for Government participation to take place if worthwhile spectacular progress is to be made.[94]

The modification of governmental policy toward actual participation in agricultural production is undoubtedly attributable in large part to the ambitious goals set forth for the agricultural sector. The primary goals are: (1) the conservation and improvement of the land and forest for future generations; (2) the attainment of self-sufficiency in all foodstuffs that can be produced in Sierra Leone but which are now imported; (3) rapid expansion of agricultural exports to pay for necessary imports.[95]

The purpose of this section is to examine the more important programs devised by the government to attain these goals, excluding, however, the marketing programs which are treated in the next chapter. In addition, the research and extension programs are omitted as they have become standard features of most African countries.

1. *The Rice Schemes*

In 1932 the Department of Agriculture initiated a program designed to attain each of the three goals set out for the agricultural sector. The department believed that the following objectives could be obtained through the substitution of swamp rice cultivation for upland rice production: the elimination of shifting cultivation; self-sufficiency in rice production; and the exportation

93. Sierra Leone, *White Paper on Natural Resources Policy* (Freetown: Government Printer, 1961), p. 2. Italics supplied.
94. *Development Plan of the Agricultural Services*, p. 6. Italics supplied.
95. Sierra Leone, *White Paper on Natural Resources Policy*, pp. 1–2.

of rice in surplus years.[96] Since that date, the Department of Agriculture has pursued these objectives, although the methods employed have undergone radical change. The present subsection will examine the evolution of the government's involvement in stimulating rice production.

The idea of substituting swamp rice cultivation for upland rice production was not new in 1932; that year merely witnessed the formalization of a previously implicit policy of the government. Swamp rice cultivation in Sierra Leone had developed and expanded through the efforts of Temne rice farmers who had planted swamp rice in the late nineteenth century in the Scarcies River Basin. By the 1920's, these Temne rice farmers had become experienced swamp rice cultivators and were able to assist two Indian experts in demonstrating swamp rice techniques in the Sherbro Island area (including the transplantation of rice seedlings, a comparatively new technique in West Africa).[97] The combined results were so encouraging that the Department of Agriculture report stated, "There is little doubt that people will grow increasing amounts of swamp rice without much encouragement from us."[98]

By 1934, despite the optimism of the quotation given above, the government decided to abandon its established hands-off policy. The Rokupr Rice Research Station was established for the explicit purpose of developing and testing improved varieties of swamp rice seeds; the Revolving Seed Schemes were initiated;[99] a cooperative marketing society for swamp rice was created; and loans were advanced to farmers to finance the clearing of mangrove from tidal swamps.

With the advent of World War II, these policies were extended

96. Sierra Leone, *Report of the Department of Agriculture, 1932,* pp. 1–2. The goals set forth in the *White Paper on Natural Resources Policy* are essentially the same (pp. 1–2).

97. Petch, *Report on the Oil Palm Industry,* p. 51.

98. Sierra Leone, *Report of the Department of Agriculture, 1927,* pp. 1–2.

99. This scheme was developed for two purposes: (1) the distribution of improved varieties of seed and (2) the extension of credit to farmers. The plan involved the grant of four bushels of rice to an individual farmer on the condition that he return five after harvest. Between 1935 and 1946, 93,000 bushels of seed rice were distributed under this plan (Petch, *Report on the Oil Palm Industry,* p. 58; Waldock, Capstick, and Browning, *Soil Conservation,* p. 46).

and new ones created. The most ambitious scheme involved the drainage of 550,000 acres in the Scarcies River basin; this plan was instigated at the recommendation of an irrigation engineer who flew over the area in 1941. A staff was recruited, but technical miscalculations and delays in the importation of necessary equipment prevented completion of the project. Only 950 acres were developed by 1944 and the scheme lapsed after the war.[100] In addition to the drainage of swamps, the government instituted a coercive wartime measure. The governor directed that every male inhabitant of the Protectorate produce annually two bushels of rice for sale. In order to comply with this order, some of the Native Administrations organized communal rice farms which received official encouragement. Other Native Administrations hired labor to clear swamp land and produced their own seed in an attempt to augment production.

Following World War II, the swamp clearance schemes were extended to inland swamps. Although cultivation of these swamps had long been practiced, only after 1920, when the Department of Agriculture enlarged its demonstration and seed distribution schemes, did the use of inland swamps accelerate. The Inland Swamp Clearance Scheme followed the pattern established for littoral swamps, in that the Native Administrations provided the funds while the actual clearing was supervised by an agricultural officer. After clearance, the land was divided into lots of approximately one acre, and those tribal members possessing a claim to the land under customary land rights were allocated as many as five units. The remainder of the cleared land was allotted to applicants deemed qualified by the agricultural officer. Rent was

100. Petch, *Report on the Oil Palm Industry,* p. 91; and Sierra Leone, *A Progress Report,* p. 5. The scheme was rehabilitated in the Funkedeh and Yakban areas after 1958, providing by 1963 a potential of 6,950 acres for swamp rice production. The word "potential" must be emphasized as cleared land is not always planted. Jacob Davis points out that, "as has been found out by the present Irrigation and Drainage Branch working in the Great Scarcies area, it is one thing to develop the land and make it suitable for rice cultivation but quite another thing to have the new land planted. One reason for this is that new land . . . is heavily infested with grass and other weed growth and requires very hard work over several years before it becomes clean and full yielding" (*Development Plan of the Agricultural Services,* p. 26). In other words, in terms of labor input and rice output, the Sierra Leonean farmer finds it more beneficial to farm upland areas when extensive weed growth exists.

established by and paid to the Native Administration. The lessee was prohibited from pledging the land, and any farmer could be expelled from his farm if he failed to farm his land to the satisfaction of the agricultural officer, who prescribed the varieties of crops to be grown and the final date of planting. Land reclamation schemes have continued to the present; but current estimates of acreage under swamp cultivation are unavailable, since no records of clearings have been kept and an undetermined amount of cleared land has reverted to bush.

In addition to the clearance programs, the Sierra Leone government has employed three other complementary measures in its attempt to attain self-sufficiency in the production of rice. These are subsidized fertilizer usage, mechanical cultivation, and pegging rice prices.

a. ***Subsidized fertilizer usage.*** The government has adopted the policy of paying two-thirds of the fertilizer cost in areas under mechanical cultivation. The extent of this program is limited, however, as fertilizer is only applied to about 3,500 acres of inland swamps.[101]

b. ***Mechanical cultivation.*** In the latter part of the 1940's, the Department of Agriculture began to experiment with the technical adaptability of tractors to Sierra Leonean conditions in hope that mechanical cultivation could be instituted on a large scale. The purposes of mechanical plowing were (1) to arrest the spread of weed growth in previously cleared land through deep plowing and (2) to expand rice cultivation into areas where it had not been grown before. Mechanical cultivation of rice fields has aided the control of weed growth, and the scheme has expanded rice production into previously untilled areas. However, the program has not expanded sufficiently to eliminate Sierra Leone's dependence on imported rice. When the program was

101. The financial reports for various years indicate that the government outlay for fertilizers has not exceeded £5,000 in any one year. D. T. Jack estimated in 1957 that the average cost per acre of the program to the government was £1 5*s*, which if still applicable would mean that less than 3,500 acres received the fertilizer subsidy (D. T. Jack, *An Economic Survey of Sierra Leone*, Freetown: Government Printer, 1957, p. 16).

initiated in the early fifties, the Department of Agriculture believed that rice production could be expanded 50 per cent by mechanically cultivating 330,000 acres, but the largest area yet cultivated with the aid of mechanical devices amounts to less than 20,000 acres. The failure of the program to expand as envisioned is related essentially to problems noted by G. A. Petch:

> Mechanization of this type has proved costly because of the capital costs of the machinery, the difficulty of moving it in a country of poor communications, the expense of repairs and the time lost due to delay in reports being made, the high incidence of wear and tear due to rough conditions and the large amount of labour with little experience which much be employed at least for a time and the short annual season in which the machinery is in use.[102]

The Department of Agriculture was aware of the fact that the scheme would be costly and would not be self-financing during the early phase of operations; but the department believed that eventually the program would be self-supporting. In 1957—or eight years after operations began—D. T. Jack examined the program, questioning whether mechanical cultivation could ever be established without a subsidy. He estimated that operation, depreciation, and supervision costs per acre were £6.75, while the fees paid by the farmers amounted to £3 per acre,[103] resulting in losses to the government of more than £45,000 per year.[104] Since that time, the financial accounts for the mechanical cultivation scheme have shown an excess of revenue over expenditures in only one year, 1962/63, when capital expenditures were sharply

102. Petch, *Report on the Oil Palm Industry*, p. 137.

103. Prior to the establishment of the policy of prepayment of plowing fees in 1958, a large percentage of the revenue due the government was lost as a result of non-payment. The Cole Commission reported in 1963 that arrears of £16,000 (some going as far back as 1956) existed in the Bonthe area alone. The commission also reported that "collection of outstanding arrears was well-nigh impossible because most of the debtors could not be traced. Many of these bad debtors, it would appear, changed their names and would not answer to the name in which the debt was made. . . . Thus unless a debtor was known personally to a member of the department, he could not be traced" (Sierra Leone, *Report of the Commission Appointed to Enquire into and Report on Matters Contained in the Director of Audit's Report on the Accounts of Sierra Leone for the Year 1960/61; and the Government Statement Thereon*, Freetown: Government Printer, 1963, p. 11. Cited as the *Cole Commission Report* hereafter).

104. Jack, *An Economic Survey*, p. 16.

curtailed, and the accounts indicate an overall monetary loss of about £400,000 during the lifetime of the scheme.[105]

The future development of the scheme is difficult to ascertain, since the administration of the project is in the process of changing departments. Since the late fifties, the Department of Agriculture has been attempting to reduce its direct participation in the scheme by turning over established projects to the Co-operative Department; the Department of Agriculture's Ten-Year Plan does not refer to the program. Whether the Co-operative Department intends to expand or consolidate the existing program is unknown; it is known, however, that the government intends to construct a Farm Mechanized Training Center, a fact which may signify future expansion.[106] Yet, unless operating costs can be reduced and/or the fees paid by the farmers increased, it is doubtful whether the scheme will ever expand to the point that it would have significant impact on rice production.

c. ***Pegged rice prices.*** The final policy measure to be discussed in this subsection is the control of rice prices. Prior to 1952, the price of rice—if wartime control measures are excepted—was determined solely through market forces. But in 1952 the government adopted the proposals of a committee set up under the following terms of reference: "to enquire into, and to report on the production and marketing of rice in Sierra Leone, to make recommendations as to the measures to be taken to stimulate production, to regulate prices and to regulate speculation, in the best interests of producers and consumers."[107]

The government accepted, *inter alia,* the following committee recommendations:

1. "That in order to encourage the planting of rice a guaranteed price to producers should be fixed annually before the time for clearing farms. . . ."
2. "That in order to implement the guarantee that the producers will receive this price the Government must be prepared

105. See Sierra Leone, Ministry of Finance, *Financial Report* (Freetown: Government Printer, 1950–64).
106. Sierra Leone, *A Progress Report*, p. 7.
107. *Cole Commission Report,* p. 122.

to buy a considerable proportion of the crop offered up for sale to the present storage capacity. Future meetings of the Committee should review the question whether Government should buy an unlimited quantity."

3. "The Government should hold adequate reserve stocks of rice not only in Freetown but also in the larger urban centers in the Protectorate and that adequate storage accommodations should be provided where this is lacking."[108]

Implementation of this program required strict control of rice imports in order to prevent the sale of "cheap" foreign rice to the government and to exclude the possibility that foreign rice might undersell domestic rice in the local markets. Accordingly, the government prohibited the importation of foreign rice except under license from the government and stipulated that all foreign rice must be sold at prices set by the government.

The techniques of subsidizing producers in order to stimulate production are well known and need not be discussed here. However, the program as administered by the Sierra Leone government raises two interesting questions which must be given consideration.

First, the amount of rice which can be purchased from producers over a given period of time is limited by the amount of storage capacity available to the government and the sale of rice from existing stocks during that period. When existing facilities are filled to capacity, additional governmental purchases are impossible and the overflow must be sold in the free markets. Before the late fifties, the existence of this constraint went unnoticed as the movement of large numbers of Sierra Leoneans and foreigners to the diamond fields and the increase in personal incomes absorbed any potential overflow. The government even raised its purchase price from 14*s* per bushel to 22*s* per bushel in 1955 in an effort to prevent the shortage of rice as men left their fields. With the egress of miners from the diamond areas in the late fifties, the cessation of the expansion of alluvial output, and the mass importation of rice, however, the situation was reversed, and the government found itself with large stocks of rotting rice. In an effort

108. *Ibid.*, p. 123.

to check the further accumulation of rice, the government steadily reduced the price so that it is now offering only 16*s* per bushel.[109] Thus, until the government expands its storage facilities, the storage constraint prevents the Rice Department from stimulating rice production by increasing its purchase price. The extent to which this storage constraint has decreased potential output is an empirical question which can only be answered when something is known about the price elasticity of supply for rice.

The second point to be raised about the existing rice policy is whether a subsidy is actually being paid to rice producers who sell their crop to the Rice Department, as is frequently claimed.[110] Subsidization of production implies either lump sum transfers to producers or the pegging of prices paid to producers above relevant market prices, but neither subsidization method—excluding the mechanical cultivation and the fertilizer schemes—has been adopted in Sierra Leone. The government does peg its purchase price for rice but sets the price according to its estimates of the average market price for the forthcoming crop season. This is a stabilization and not necessarily a subsidization measure. The Cole Commission has, however, attempted to perpetuate the idea that the government subsidizes rice producers by adopting an unusual accounting procedure; the commission states:

> So far as Government's profit is concerned as shown in the proceeding [*sic*] sub-paragraph, this is used to subsidize the price paid to the producer equivalent to £75 per ton milled rice equivalent. The cost of this subsidy is as follows:

Purchase price of 4086 tons milled rice equivalent at £75 per ton	= £306,500
Selling price of 4086 tons at £60 per ton	= £245,160
Loss on sales that is cost of Subsidy[111]	£61,340

The implication is that producers are being paid £15 more per ton than the prevailing market price. The commission fails to note

109. C. G. White, "Statement by the General Manager, Government Rice Department" (Freetown: Rice Department, mimeographed, 1964), p. 2.

110. See the *Cole Commission Report*, pp. 114–115, and C. G. White, *Forecast of Requirements for 1965* (Freetown: mimeographed, Oct., 1964), pp. 1–2.

111. *Cole Commission Report*, p. 115.

that for the year under consideration the government paid producers only £37.34 per ton for 6,140 tons of husk rice (4,086 tons of milled rice equivalence), or a total of £229,300. Producers thus received £77,200 less than the amount alleged by the commission, which apparently represents the cost of milling the raw husk rice. Since the rice producers and traders frequently sell native-cleaned rice in the local markets, a prima facie indication of profitability, the "producer" is in effect subsidizing government milling operations.[112] The fact that the Rice Department has recently been turned into a separate corporation to be administered on a "commercial" basis further indicates that rice producers are not subsidized by the government but are paid at going market rates determined partially by government policy.

Despite the programs examined above, Sierra Leone has not maintained self-sufficiency in the production of rice. The annual Sierra Leone *Trade Reports* for the past five years show that net imports of milled rice in tons have been:

1959	43,000
1960	28,000
1961	4,000
1962	26,000
1963	21,000

These imports comprise about 5–10 per cent of total rice consumption, depending on the domestic production estimate used. If one excludes 1961, when a bumper harvest of rice was produced, there appears to be a slight downward trend in total rice imports; this apparent reduction, however, is due more to the import restrictions imposed by the government in its attempts to reduce its accumulated stocks of husk rice than to any other causal factor.[113] The Rice Department estimates that rice imports must increase to

112. The government also finds the purchase and sale of native-cleaned rice to be a profitable operation. For the 1964/65 buying season, the government purchased native-cleaned rice at £47.5 per ton and sold the same during the "hungry" period for £53.0 per ton. If storage and wastage costs are less than £5.5 per ton, then the government profits from such trade.

113. C. G. White stated in September, 1964, that "the main policy during the past year has been to convert the stocks of rice held, into cash, as fast as possible" ("Statement by the General Manager, Government Rice Department," p. 1).

30,000 tons per annum after 1965, when reserves of husk rice will be exhausted, if the sales of the Rice Department and private traders are to be maintained at their present levels.[114] If local production is to be substituted for imports, approximately 40,000 acres of new swamp land will have to be brought into production. If, in addition, allowance is made for an annual population increase of 2.5 per cent and an increase in per capita rice consumption from the present estimated three-fourths pound per day to one pound per day, then by 1970 an additional 55,000 acres must be brought into production to accommodate the increased population, and 154,000 additional acres would be needed to improve dietary standards. Thus by 1970, if Sierra Leone is to become self-sufficient in the production of rice, either yield per acre must be increased substantially or approximately 250,000 new acres devoted exclusively to swamp rice must be brought into production.[115] The Department of Agriculture estimates that 65,000 acres of tidal land can be reclaimed and that large numbers of inland swamps can be brought into swamp rice production; but since feasibility studies of the area have not yet been made and only one-half of the area under consideration has been surveyed, it is doubtful whether marked progress on either project can be obtained by 1970.[116]

In addition to the lack of surveys and feasibility studies, the proposed governmental plans for augmenting rice production have failed to consider alternative policy mixes. For example, increased use of the bolilands is mentioned but not considered as an alternative,[117] and more intensive farming of existing croplands

114. C. G. White, *Forecast of Requirements for 1965*, p. 2. The Rice Department suggests that if rice imports are to be avoided in the future and "if private individuals cannot be induced to farm the land, Government could perhaps itself organize the cultivation through the Ministry of Natural Resources."

115. These statistics do not include estimates for the substitution of swamp rice for marketed outputs of upland rice (a measure desired by the government), nor do they make allowance for unsuitable drained land.

116. Davis, *Development Plan of the Agricultural Services*, p. 24. During 1963, 6,950 acres were reclaimed in the Funkedeh and Yakban areas as mentioned above. Only 1,050 acres were reclaimed in 1964.

117. Jacob Davis merely notes that "it is important that upland production does not decrease during the period and so nullify the plan. It is suggested that hand and hand with a plan for the development of new tidal swamp areas, energetic measures must be taken to encourage transfer from the more heavily eroded upland slopes to upland (inland) swamps by means of grants in aid . . . by

is not discussed. Indeed the implicit assumption that Sierra Leone possesses a comparative advantage in the production of rice is not questioned; the agriculturalists merely recite the *non sequitur* that since rice is the staple food of the country, then Sierra Leone should obviously be self-sufficient in its production. An excellent illustration of this position is shown in the following example. In 1963 the government applied to FAO for financial aid to study the Sewa-Waanje-Jong flood protection and irrigation scheme. However, the area under consideration is also an important diamond mining area, a fact the government failed to note when making the request for aid. It is obvious that the government will have to consider the diamond costs of the scheme as well as the construction costs before deciding whether the benefits of greater agricultural production are sufficient to warrant the project.

2. *The Cattleowner Settlement Scheme*

The tsetse-fly-resistant N'dama dwarf cattle of Sierra Leone are owned almost exclusively by a group of people known collectively as Fulas, nomadic herders indigenous to French Guinea. The movement of their cattle within and between grazing areas often disrupts local farming, causing numerous suits in the local courts for "cow damage."[118] In an effort to alleviate the resulting hostility between the two groups and to improve the quality and quantity of beef production, the government enacted the Reserve Grazing and Farming Areas Tribal Authority Order of 1953. The order grants to any individual one square mile of land for every 90 to 100 cattle owned, with the proviso that the block of land be at least one mile from any established village or town. During the dry season, the cattleowner is provided with additional grazing land in order to prevent overgrazing. On each block of land, the government constructed an earth dam with a sluice and spillway

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drainage works . . . and by mechanical cultivation" (*ibid.*, p. 23). This statement can hardly be considered an alternative "plan"; rather it appears as an *ad hoc* appendage to an incomplete idea.

118. Local farmers often cultivate their crops as closely as possible to the Fulas' herds in order to assure "cow damage" (D. J. Watson, "The Cattle-Owner Settlement Scheme in Sierra Leone," *Empire Journal of Experimental Agriculture*, XXX, Jan., 1962, 42).

to conserve water for the dry season and to provide suitable areas for swamp rice cultivation. The cost of improving each block of land, estimated to be between £100 and £120, was initially borne by the local district council.[119] Rents were set at £9 a year (reduced to £6 in 1958) and were divided equally among the paramount chief, the Tribal Authority, and the district Fula headman. Each Fula was granted a tenancy of seven years with a renewal option of seven years provided the land was not overgrazed.

Between 1953 and 1958, the number of land units occupied by Fulas rose rapidly from 14 to 86, and between 1958 and 1960, the number of occupancies stabilized at the 1958 level.[120] Nevertheless, the permanence of settlement sought by the scheme was vitiated by a rapid turnover of settlers due to such diverse factors as (1) the conversion to prepayment of rents in 1957; (2) the prohibition against multiple occupancies; and (3) the migration of a large number of Fulas to Guinea following its political independence.[121] In an effort to counter further emaciation of the scheme, the government increased its active participation. In 1957 and 1960, grants were solicited from the Colonial Development and Welfare Fund for the purchase of lorries and tractors to mechanize construction and plowing in the settlement areas; rents were reduced by one-third, barbed wire fences were erected, improved grass was sown, free tree crop seedlings were given out, traps were set for leopards, and late burning was instigated as a means of controlling bush growth.

Nevertheless, as noted in the following quotation, the results of these changes were disappointing:

> It became regretfully obvious at this stage, that whilst willing to accept our aid, the Fulas in the main had taken no steps to help themselves, and were relying completely on the Department's help. When this was discussed, they explained that whilst we had machinery to do

119. A. K. Murray, "The Fula Cattle Owners of Northern Sierra Leone, Their Cattle and Methods of Management," *Tropical Agriculture*, XXXV (April, 1958), 106.

120. Sierra Leone, *Report of the Department of Agriculture, 1960*, p. 23. This is the latest published report.

121. See Watson, "The Cattle-Owner Settlement Scheme," p. 46.

the work they had not, and were therefore unable to do it. Since funds could not be expected indefinitely to finance improvement of settlements as they spread, this total reliance on machinery had to stop, and with the conservative-minded Fulas example was considered the best teacher.[122]

Thus in 1958, the Department of Agriculture discontinued much of the direct aid and subsidization given the settlers and established "model" settlements operated by progressive Fulas in order to demonstrate efficient farming and cattle raising. The model farms, however, proved to be ineffective, and the program lapsed in 1960.

Since 1960, the development of the scheme is difficult to follow as a result of the Department of Agriculture's failure to publish an annual report. Nevertheless, there are two indications that the program has been almost totally abandoned: (1) the allocation of development funds to the scheme was discontinued following reductions in outlays from Le 9,404 in 1961/62 to Le 4,574 in 1963/64;[123] (2) Jacob Davis stated that "the most assured way of getting worthwhile improvement both in the numbers and quality of local stock" is through the Settlement Scheme. "If only 100 Fula cattle owners are settled in this way over the period the nucleus of cattle for the rest of the country will be assured."[124] The implications are that the previous settlers have abandoned their lands and new ones must be sought.

Thus, it appears that the Cattleowner Settlement Scheme is a dead issue at the present time. Apparently the government does not wish to continue a program which has not achieved any of its stated goals over a twelve-year period. The herders are still nomadic, the quality of beef is unchanged, and any increase in the number of cattle in Sierra Leone is largely attributable to the recent influx of Fulas from Guinea.[125]

122. *Ibid.*, p. 47.

123. Sierra Leone, *A Progress Report*, p. 17. Perhaps equally significant is the fact that this report makes no mention of the Scheme in the written text.

124. *Development Plan of the Agricultural Services*, p. 43.

125. K. G. Dalton, "The Cattleowner Settlement Scheme, Koinadugu District," *Bulletin: The Journal of the Sierra Leone Geographical Association*, No. 1 (Jan., 1962), pp. 14–16.

3. *Agricultural Credit*

Quantified estimates of the total amount of credit supplied to the agricultural sector are currently unavailable, but it is widely held that the flow of funds to farmers is insufficient to finance new improved techniques of production.[126] The government of Sierra Leone, therefore, has assumed the task of supplementing the flow of funds to the farmer. The following policy statement clearly indicates the role government desires to play:

> The provision of credit capital to farmers is normally the functions [*sic*] of banks in countries which are advanced agriculturally. In Sierra Leone, however, where most farmers are unable to offer that degree of security which is reasonably demanded by the banks, *the duty of promoting such credit must fall to the Government.* Government therefore intends to supply credit capital to farmers to enable them to undertake either individual [*sic*] or collectively specific plantation projects or agricultural settlement schemes, which are considered to be economically viable. Priority will be given to applications from already established co-operatives or farming associations, local government agricultural institutions, and individuals, who on past performance have shown the energy and intelligence to apply successfully the advice given to them by the Department of Agriculture.[127]

Under the Agricultural Loans and Credit Scheme enacted in 1961, the government grants loans for projects involving cash crops and swamp rice, poultry, pigs, and cattle. Each loan application is reviewed for its economic viability by the director of agriculture assisted by Agricultural Credit Boards established in each of the four provinces. Before the board may consider an application, the applicant must obtain a written notice from the Tribal Authority that the land he proposes to develop can rightfully be farmed by him. The government then accepts the land offered for the project as security for the loan, the Tribal Authori-

126. A curious anomaly of the arguments presented by many writers is that land tenure inhibits investment by individual farmers, yet the demand for credit far exceeds the supply of credit. While these arguments need not be inconsistent, few writers present well integrated discussions of the separate problems. See Section C of this chapter.

127. Sierra Leone, *White Paper on Natural Resources Policy,* p. 3. Italics supplied.

ties acting as trustees of the land; i.e., should a project fail through the fault of the farmer, the Tribal Authority could continue the project by replacing the defaulting farmer. Individual loans are not to exceed £1,000 (this provision has not been adhered to, as evidenced by Table 15), and the loans carry an interest rate 1 per cent above the current London bank rate. In most instances, financial assistance in the form of cash is not provided, since it is believed that the farmer would use the money for his more immediate personal needs; instead, the borrower's account is credited for the amount of the government assistance, and he begins repayment one year after the "production date" established by the minister of natural resources.

Table 15. ***Projects established under Agricultural Loans and Credit Scheme***

Type	*Number approved*	*Acreage approved*	*Acreage planted*	*Projects completed*	*Sum approved (Leones)*
Oil palm	134	1,325	775	1[a]	80,365
Cocoa	52	306	234	0	22,825
Citrus	45	155	77	0	13,836
Market and gardening	9	4	4	1	3,193
Plantation development	5	n.a.	n.a.	0	3,880
Rubber	3	30	n.a.	0	2,400
Coffee	4	12	5	0	910
Onion	2	2	2	2[a]	660
Poultry	13	0	0	6	45,211
Cattle raising	5	n.a.	n.a.	0	9,460
Piggery	3	n.a.	n.a.	1	2,400
Rice mills	14	0	0	7	15,050
Nut cracker	5	0	0	3	1,920
Coffee huller	2	0	0	1	1,774
Total	296	1,834	1,097	22	203,884

a. Project failed. There is no available record of repayment of existing loans.
Source: Sierra Leone, *A Progress Report*, p. 9.

Table 15 lists the available data concerning the projects established under the Agricultural Loans and Credit Scheme. The total sum approved, exceeding Le 200,000,[128] represents 22 per cent of all agricultural development expenditures appropriated since 1961; only the Mechanical Cultivation Scheme exceeds ex-

128. The current statutory limit for the scheme is Le 220,000.

penditure from the loan fund. Over two-thirds of all projects approved and well over half the funds approved came from the first three categories: oil palm, cocoa, and citrus. Poultry projects absorb another quarter of the funds and the remainder of the total approved sum is taken by a wide range of miscellaneous projects.[129] The range of loan sizes cannot be ascertained from the data, but the average loan is Le 788. Projects involving coffee had the smallest average loan size, Le 228, while poultry projects with an average of Le 3,477 had the highest.

It is evident from what has been said above that the Agricultural Loans and Credit Scheme restricts the freedom of choice of the borrower by forcing him to adopt the technical assistance and physical aid of the Department of Agriculture. The borrower is unable to seek out alternative methods of accomplishing the desired task, which results undoubtedly in wastage of scarce resources. However, from the government's point of view, the present arrangement is most advantageous since it guarantees that the project will be completed in light of its own technical and economic criteria even if the arrangement does not fully guarantee that the project will be efficiently operated; and the government possesses one distinct advantage over private lenders, in that it may expel an inefficient farmer, which is the closest approximation to foreclosure in existence in the provinces of Sierra Leone. The inability of the borrower to choose alternative construction and production techniques is partially compensated for by the decidedly lower interest charges of the government; the next best alternative for the borrower is the 15 per cent per year interest rate charged by the thrift co-operatives. Loans from traders and local moneylenders often reach 25 per cent a month, secured invariably by a standing crop.[130]

129. The pursuit of the goal of import substitution can be identified in the loans to the onion projects. Onions are one of the largest food imports of Sierra Leone, £129,000 in 1959 and £164,617 in 1963. The *White Paper* of 1961 listed onions as one of the commodities that could be successfully grown in Sierra Leone, although they had never before been planted in the country. It is notable that both of the attempted projects failed.

130. Sierra Leone, Ministry of Trade and Industry, "Need for Agricultural Credit," p. 2.

The major disadvantage of the present program is its limited size.[131] The Department of Agriculture would like the government to establish an Agricultural Credit Bank with a paid-in capital of £600,000, but little has been heard of this proposal since its conception in 1963. An additional disadvantage of the present system may stem from the handling of the individual projects by the local agricultural officers, since the Sierra Leone Department of Agriculture believes that such administration is detrimental to the overall relationship between the agricultural officer and the farmer. However, until the number of trained and skilled technical assistants can be augmented, there seems to be no other alternative.

In conclusion, the government has taken upon itself the task of providing credit to Sierra Leonean farmers. The scope of this program has been somewhat limited in the past, but extension of the program either through the establishment of an Agricultural Credit Bank or through grants to co-operative thrift societies seems highly likely.

4. *Plantations*

At the present time, all large-scale plantations in Sierra Leone are governmentally owned and operated. Small commercial rubber and oil palm plantations exist, but their output is negligible.[132] Prior to April of 1965, the Ministry of Natural Resources controlled and operated all government plantations with the exception of the oil palm plantations maintained by the SLPMB; but since that time SLPMB has been appointed controller of all government plantations (the so-called Tree Crop Plantations

131. Although exact estimates are not possible, it is unlikely that the Agricultural Loans and Credit Scheme provides over 5 per cent of all agricultural credit extended during a given year. As would be expected, annual appropriations to this fund are quickly allocated.

132. The *Trade Reports* show that no rubber has been exported from Sierra Leone since 1951, although an inventory of rubber trees in 1950 showed that one plantation of 6,600 trees existed at Kenema (J. S. Sawyer, *The Rubber Industry in Sierra Leone and Its Prospects*, Freetown: mimeographed, 1963, p. 12). Similarly, private oil palm plantations exist, but none approach the size of those operated by the SLPMB.

Scheme). Under this new authority, the board plans to establish avocado, banana, citrus, coconut, pineapple, and rubber plantations during the next three years.[133]

The attitude of the government toward plantations is rather uniform, so only a few examples of its policies need be given. In regard to private foreign investment, the government has formulated the policy that 51 per cent of the equity of any enterprise involving the use of land must be held by the government.[134] In practice this means that the government desires to construct and maintain the actual plantation, leaving only the processing facilities to foreign capital. But exceptions to this policy are possible when the government lacks the technical skill to develop a plantation, or the processing facilities are either impractical or comprise a small portion of the overall expense of establishing the plantation. With the exception of oil palm plantations, the major plantation projects concern rubber and sugar. In respect to the rubber industry, the Sierra Leonean government is constructing three rubber estates totaling 71.53 square miles.[135] These plantations are supposed to act as "demonstration" or "parent" plantations for smaller commercial plantations which the government hopes will be established in the immediate areas. In order to encourage the establishment of private plantations, the government subsidizes private citizens for every acre they plant and, in an attempt to foster foreign investment, has stated its policy that "every encouragement should be given to foreign capital to develop the rubber industry of Sierra Leone and there is no intension whatsoever now and in the future of bringing rubber under a Marketing Board."[136] The sugar industry is being studied through governmental subsidization of an exploratory investigation by the Booker's Agricultural and Technical Services Limited.

Finally, the extent of the planned role of government in the plantation field is illustrated by the government's intrusion into the Christmas tree field under the Christmas Tree Scheme. In

133. Sierra Leone, *A Progress Report*, p. 57.
134. Information from an interview with Hugo Godbeer, Ministry of Natural Resources, February, 1965.
135. Sierra Leone, *A Progress Report*, p. 13.
136. Sawyer, *The Rubber Industry*, p. 15.

1963/64 the government sold 303 trees for Le 404. "Last Christmas the price was raised and 366 trees were sold for Le 806. The Christmas tree nursery at Regent is being expanded and at least 5,000 plants (minimum price Le 2) will be available for sale this year."[137]

In summary, this chapter has treated four major problem areas: the rationality of shifting cultivation, the effects of the existing land tenure system on agricultural investment decisions, the price responsiveness of the Sierra Leonean farmer, and the role of the government in promoting agricultural production. The general conclusion of the chapter may be stated as follows: the native farmer of Sierra Leone, working with rather primitive implements and a soil which rapidly lost its fertility, evolved a rather efficient agricultural system which permitted a relatively sparse population to attain an ecological balance with its environment. Additional investment in this primitive system was not undertaken because of the low rates of return on capital. Although the prevailing system of land tenure did restrict agricultural investment, the restriction was due to a contraction of the supply of investment funds (as land could not be mortgaged) and not to a contraction of the demand for such funds. The Sierra Leonean farmer appears to adopt new lines of economic endeavor eagerly when he is convinced of their profitability, and he is aware of both absolute and relative price changes.

In general, the government has not sought to increase agricultural production by working through the price mechanism. Rather it has increasingly substituted direct supervision of productive efforts, e.g., the Mechanical Cultivation Scheme and the establishment of government plantations. Advocates of greater governmental intervention are now stressing the need to establish state farms in addition to the plantations owned and operated by the SLPMB. Thus the trend is toward increased governmental participation in the agricultural sector of the Sierra Leonean economy, which may tend to vitiate the positive responses of Sierra Leonean farmers to economic incentives.

137. Sierra Leone, *A Progress Report*, p. 13.

• 3 •

The Marketing of Goods and Produce in Sierra Leone

The study of the processes whereby goods and produce are marketed within an economy should include, ideally, a detailed analysis of the monopolistic tendencies existing at different levels of the distributive hierarchy. Such an analysis, however, is not feasible within the context of the Sierra Leonean economy since data and information necessary for the assessment are unavailable, e.g., concentration ratios for general or specific sectors of trade cannot be calculated and no study or information exists concerning collusive agreements among firms. Because of these informational deficiencies, the present chapter will concentrate primarily on the one existing marketing monopoly for which data are available, the Sierra Leone Produce Marketing Board. Attention will also be given to the role of the expatriate firms vis-à-vis the indigenous firms in Sections A and B of this chapter, but even within this broad classification a scarcity of data exists. Consequently, these sections will focus on various governmental programs which have been designed to protect indigenous entrepreneurs from outside interferences.

A. The Role of the Expatriate Firms in the Commerce of Sierra Leone

Although a specific historical study of the role of expatriate firms in the economy of Sierra Leone has never been made, Sierra Leoneans allege—and the available evidence substantiates their allegation—that expatriates control the internal and external com-

merce of the country.[1] From the economist's viewpoint, the predominance of expatriate firms in the trade of the country cannot be condemned per se; but Sierra Leoneans indorse such condemnations on the basis that expatriate firms "exploit" the people. The charge of exploitation emerges from the belief that the value and volume of trade is set and immutable; hence, the presence of the existing expatriate firms and the emergence of new ones is a net loss for the African community. Africans do not gain from trade; only the non-Africans benefit from the exchange of goods. Action must therefore be taken "to really drive them away."[2] Examples of this attitude may be seen from the following statements taken from the debates of the House of Representatives:

> It is particularly noticeable that when people come from these countries and engage in trade there is no question of our benefit either commercial or cultural from these countries.[3]

> In fact, Mr. Speaker, the entire foreign trading community in Sierra Leone have stretched far and wide and draining our economic life in this country; today you can go to Kingsway and buy a box of matches, the Lebanese are retailing bread. What is left for the poor African to do?[4]

As a result of such beliefs, the Parliament of Sierra Leone has

1. The available statistics for the year 1955 show only the distribution of trade among the various nationalities. The figures indicate nothing about the degree of concentration, monopolistic practices, and so forth. The figures for imports and exports refer to the percentage of the total value accounted for by each nationality and the figures for retail stores show the percentage of the 483 registered retailed stores operated by each nationality.

	Imports	*Exports*	*Retail stores*
Europeans	67.1	55.3	2.1
Syrian/Lebanese	19.4	10.9	84.3
Indian	11.2	0.2	1.2
African	2.1	1.5	11.8
SLPMB	0.0	32.0	0.0
Unclassified	0.2	0.2	0.6

Information from N. A. Cox-George, *Report on African Participation in the Commerce of Sierra Leone* (Freetown: Government Printer, 1957), pp. 7, 11, 23. The paper by R. E. Cole, "Mercantile Trade in Liberia," in *An Economic Survey of Liberia,* gives helpful information for the analysis of expatriate firms in Sierra Leone.

2. Sierra Leone, House of Representatives, *Parliamentary Debates,* Vol. II, Motions 647. The desire to drive the foreigners out stems also from nationalistic fervor and political motivations.

3. *Ibid.,* Motions 638.

4. *Ibid.,* Motions 635.

actively sought to restrict the retail and wholesale activities of foreigners. In December, 1962, Parliament banned foreigners from retail and wholesale trade in rice[5] and in March, 1965, foreigners were banned from the manufacture of cement blocks for sale; the sale of granite or stone; the provision of any type of transport service except as used in the conduct of one's own business, provided that business is not the provision of transportation; the operation of new bakeries or the expansion of old ones; the establishment of new mineral water factories; the operation of service stations except when garages are attached; and other activities described in the following catchall category: "With effect from April 1, all non-Sierra Leonean individuals and combines at present engaged in retail trade shall cease to engage in such trade from the time and in the areas as shall annually be indicated by the Minister of Trade and Industry."[6]

The probable restrictive effects of these actions on the aggregate volume of trade and economic activity were not considered or were not considered relevant because of the belief in the fixity of the aggregate level of trade. However, the promotion of the less efficient firm rather than the more efficient must necessarily reduce total output, stifle competition, provide windfall profits to favored firms, and raise prices to consumers in terms of what would have prevailed in the absence of these restrictions. It is unfortunate that the government failed to consider the most efficient form of promoting African participation in the commerce of Sierra Leone, i.e., direct subsidization, which has the additional merit that the costs of the program are directly revealed to the public in the form of increased taxes.[7] It is notable that the

5. The resolution passed by Parliament reads: "In view of the fact that Rice is the staple food and, therefore, the lifeblood of the people of this country, and in view of the fact that certain non-African traders who have virtual monopoly in the trade in Rice have from time to time inflated prices and created conditions of famine, *Be it resolved* that both the wholesale and retail-trade in Rice be exclusively restricted to African Traders" (*ibid.*, Motions 648).

6. Freetown *Daily Mail*, March 25, 1965, pp. 1, 3. In addition, Sierra Leonean firms must work in conjunction with non-indigenous firms in the planning, designing, and supervision of construction works. Contracts with non-indigenous firms will only be given and validated on this basis.

7. P. T. Bauer proposes several methods of promoting African participation through direct subsidization, in "The Role of Expatriates," *West Africa*, XLVI (Aug. 18, 1962), 913.

government has found it expedient to rescind the flat prohibition on foreign participation in the rice trade, as a considerable number of the existing marketing, credit, and storage channels were destroyed;[8] even the Rice Department has been forced to retain the services of six non-African firms, but the department plans to terminate their services as soon as possible.[9]

In addition to the restrictions imposed upon foreigners, the government has recently instituted price controls on a limited number of goods.[10] Since 1962, the prices of eggs, sugar, salt, and matches, as well as rice, have been set by the government, and steps are being taken to extend the controls to automobiles, trucks, and automotive spare parts. The decision to control the prices of the latter group of goods stems from the recommendations of a commission appointed to study the price structure of motor vehicles and their spare parts. The commission recommended that the government control the prices of automotive goods because the monopolistic practices and policies of the expatriate firms concerned allowed them to reap "abnormal" profits.[11] The commission specifically rejected the alternative of forming a court similar to the British Monopolies and Restrictive Practices Court because "in an intelligent community they [the courts] can by exposing restrictive practices generate community opposition to such monopolies and by so doing induce price reductions; but that is not the same thing as fixing prices and it is doubtful if one can rely on such educative effects of these courts in the setting of an under-developed community where education is not widespread."[12] Thus the government has taken upon itself the task of deciding at what prices goods should sell as well as who should sell them.

8. At the present time, foreigners may trade in nine of the thirteen districts.

9. White, *Forecast of Requirements for 1965*, pp. 4–6. The department does not report the percentage of total rice purchases made by these expatriate firms.

10. The power to regulate the prices of all goods other than airplanes and vessels was granted the government under the Price of Goods Act, No. 22 of 1952. This act provides that the governor-general may fix or regulate "the prices at which any controlled goods may be sold" (para. 4c). Before the early sixties only the price of rice had been controlled.

11. Sierra Leone, *Report of the Commission of Inquiry into the Price Structure of Motor Vehicles and Their Spare Parts* (Freetown: Government Printer, 1962), pp. 54–55.

12. *Ibid.*, p. 52.

B. African Trading and Marketing

The statements that everyone in West Africa is a trader and that "Africans frequently do not regard trade as an occupation (especially when carried on by dependents). . . . They regard it as part of existence. . . ."[13] do not overly distort reality in the case of Sierra Leone. Traders are everywhere, and although the number of such traders and their contribution to gross domestic product cannot be measured, the few available statistics and studies of their activities illuminate their prevalence in Sierra Leone.[14] Banton, for example, estimates that in 1953 at least 7,000 of the 28,000 adult women living in Freetown were engaged in trade, and a more recent sample survey of Freetown shows that 328 of 756 enumerated women over fifteen years of age were employed in "commerce."[15] In addition to the activities of the women, Cox-George reported that in 1955 more than 1 out of every 143 inhabitants of Freetown was a licensed hawker, while 1 out of 12 and 1 out of 13 of the inhabitants of Kenema and Moyamba, respectively, were licensed hawkers.[16]

Small shops or stalls are found on almost every street in the main cities and towns, and adult trading is complemented or aided by a large contingent of children who frequently have nothing to sell except a few handfuls of peanuts, oranges, bananas, or a few broken packages of cigarettes. In general, indige-

13. P. T. Bauer, *West African Trade* (Cambridge: Cambridge University Press, 1954), p. 11. Michael Banton points out in *West African City* that the women of Sierra Leone are expected to contribute to the finances of the household and that their traditional contribution in the form of farming has been supplanted by trade in the transitional society. However, the women "find the job not without its attractions" (p. 95), by which he means communicative and social attractions as well as economic. See also the Introduction to *Markets in Africa,* ed. Paul Bohannan (Evanston, Ill.: Northwestern University Press, 1962), pp. 15–19.

14. The only detailed study of trading and marketing in Sierra Leone, V. R. Dorjahn's "African Traders in Central Sierra Leone," in *Markets in Africa,* pp. 61–88, treats only a limited geographical area of Sierra Leone, but this study is indicative of trading and marketing in other areas.

15. Banton, *West African City*, p. 94; Kumin, *Report to the Government,* pp. 51, 52. The report also shows that 103 of the 689 adult males in the sample were engaged in commerce.

16. *Report on African Participation,* p. 25.

nous commerce is confined to small-scale trading operations, partially reflecting the ease of entry into the field and the scarcity of capital and investment funds, but a small and growing number of Sierra Leonean firms are beginning to rival the expatriate firms in size and sales.[17] The imposition of official restrictions on expatriates in certain areas of trade should promote the growth of additional large-scale indigenous firms, unless the overall volume of trade or the volume of selected items such as rice should fall as a result of the actions of the government.

Writers such as Cox-George allege that the "towns have too many traders,"[18] but these writers fail to understand that a labor-intensive marketing system is economically rational when labor is plentiful relative to capital.[19] The services of these intermediaries are less costly than alternative methods of distributing agricultural produce and imported merchandise. In the long run, the services of many of the middlemen will become unprofitable links in the distributive chain, and their services will no longer be demanded; but until the transportation and communication facilities are improved and alternative economic pursuits become more attractive, some form of the present system with its multiplicity of intermediaries must be retained.

A slight modification of the indigenous system of marketing export crops, if not imported merchandise, has already occurred as a result of the development of the governmentally sponsored co-operative movement.[20] The bulking of export crops now takes place through co-operative societies, although a large but undetermined amount of produce is still bulked on the level of the individual farm by African agents of the expatriate firms. Several

17. Until the twentieth century the Creoles dominated the commerce of Sierra Leone, but various factors including "competition from Syrian traders and European retail firms . . . contributed to the loss of the near-monopoly which the Creoles had enjoyed" (Arthur Porter, *Creoledom*, London: Oxford University Press, 1963, p. 13).

18. *Ibid.*, p. 25.

19. See the comments of Bauer in *West African Trade*, pp. 26–29, and "The Role of Middlemen," *West Africa*, XLVI (Aug. 25, 1962), 945.

20. In 1950 there were only 29 co-operative societies. There are now 710 societies with a membership of 40,000. Only 16,000 of the members belong to marketing co-operatives. Total volume of transactions of the co-operatives including the credit societies was £600,000 in 1964 (Sierra Leone, *A Progress Report*, p. 61).

centralized marketing societies have been formed to co-ordinate the bulking of produce on an inter-village level, but the sales of these centralized co-operatives, which are agents of SLPMB, accounted for only 6 per cent of the tonnage of palm kernels purchased by SLPMB in 1962/63, 18 per cent of the coffee, and 38 per cent of the cocoa.[21] Within the co-operative movement itself, there has been a relative shift away from marketing organizations. Thrift and credit co-operatives in 1964, for the first time, comprised over 50 per cent of the total number of co-operatives, which is a reflection of the liberalization of the governmentally guaranteed, bank-overdraft privileges for co-operatives.[22]

In summary, African traders constitute an important link within the distributive chain, but they act primarily as agents of the expatriate firms or sellers of local produce. Some modification of the distributive system has occurred with the advent of the marketing co-operatives, but the marketing system remains relatively unchanged from that which prevailed twenty or thirty years ago.

C. Sierra Leone Produce Marketing Board

With the outbreak of World War II in September, 1939, the British government proscribed the private exportation of cocoa from British West African countries in an attempt to prevent the depression of cocoa prices; the government believed that the withdrawal of Axis demand for cocoa would unduly depress prices and cripple not only the cocoa industry but the entire economies of Ghana and Nigeria.[23] Therefore the government granted the Ministry of Food the monopoly right to export cocoa and to set prices paid to producers and middlemen acting as licensed buying agents of the ministry. In 1940 the West African Cocoa Control Board assumed the duties of the Ministry of Food

21. SLPMB, *Annual Report*, 1962/63, p. 9.

22. Sierra Leone, *A Progress Report*, pp. 60–61. See the section on agricultural credit for a fuller discussion of this point.

23. A more complete history of the early stabilization measures may be found in Great Britain, *Report on Cocoa Control in West Africa 1939–1943 and Statement on Future Policy*, Cmd. 6554, 1944, and *Statement on Future Marketing of West African Cocoa*, Cmd. 6950, 1946.

but relinquished them in 1942 when control measures were extended to palm kernels and other produce under the newly formed West African Produce Control Board (WAPCB), the prototype of all future West African marketing boards. The end of the war ruptured the supposed rationale underlying the continuing existence of WAPCB, but it was widely believed both in Great Britain and West Africa that it

> would not be in the genuine interests of either producers or consumers to revert after the war to pre-war market conditions. War experience has added weight to the view that the prime need of the cocoa industry, if it is to attain prosperity and efficiency, is a reasonably stable price basis, by which is meant not necessarily prices fixed over periods of several years, but the avoidance of short-term fluctuations. To achieve this it is necessary to break the direct link between the producer's price and world market prices. . . .[24]

This conclusion was reinforced by the 1938 Nowell Report, which the 1946 White Paper claimed "showed in particular how the producer, through the practices of the trade and particularly the activities of the middlemen in West Africa, failed to obtain a fair price for his crop while at the same time the trade in general became unremunerative to buying firms and a conservative marketing policy was made impossible."[25] Detailed criticism of this particular statement and other assertions stressing the necessity of continuing the marketing schemes (including the merits of the administrative experience gained from the WAPCB) need not be made here as they have been adequately treated by P. T. Bauer.[26] It is merely suggested here that the decision to continue the boards into the post-World War II period was due to political rather than economic motivations. Note the political overtones of the following obiter dictum offered by Bauer:

> But the presence of the Board at the end of the war was a principal factor in the establishment of the marketing boards. Once an organization such as a statutory export monopoly has been in existence for some years, strong tendencies for self-perpetuation come into play,

24. Cmd. 6554, p. 10.
25. Cmd. 6950, p. 3.
26. *West African Trade,* chap. xvi and pp. 256–270.

since it creates strong administrative, intellectual and material vested interests. It is generally easier to continue with a system once established than to discard it, which may involve weighing and comparing numerous arguments and considerations, and taking specific and possibly embarrassing decisions, including the abolition of important administrative posts. . . . When these inclinations and interests reinforce the preference for tidiness, for large-scale operations and for administrative convenience . . . the tendency for continuation of statutory export monopolies becomes practically irresistible.[27]

The purpose of the present section is to discuss critically and to analyze the policies pursued by the Sierra Leone Produce Marketing Board since its formation. It is not within the scope of this section to discuss the relative merits of international versus national stabilization measures, the buildup of commodity stocks versus the accumulation of buffer funds, or the design of an optimum marketing policy in terms of available instruments and targets. Neither is this section concerned with policy recommendations per se.

1. *The Powers and Functions of SLPMB*

The statutory functions of SLPMB are virtually identical to the responsibilities established for the other West African marketing boards and are as equally vague and indefinite.[28] Ordinance No. 1 of 1949, which established SLPMB, states that "it shall be the duty of the board to secure the most favourable arrangements for the purchase, export and marketing of Sierra Leone produce and to assist in the development by all possible means of the agricultural industry of Sierra Leone for the benefit and prosperity of the producers and the areas of production."[29]

It is notable that the original ordinance fails to mention specifi-

27. *Ibid.*, p. 267.

28. Compare, for example, the functions of the Gold Coast Cocoa Marketing Board cited in Bauer, *West African Trade*, p. 276, and those of the boards in the Gambia and Nigeria in United Nations Educational, Scientific and Cultural Organization, *The Role of the Marketing Boards for Export Crops in Developing Countries* (Rome, 1962, E/CN.13/50), with that of SLPMB quoted above. The indefiniteness of the ordinance has been used to expand the activities of the board into the production of agricultural crops by the board as well as the marketing of these crops.

29. Para. 15 (1).

cally the stabilization of producer prices as a function of SLPMB, even though all the official documents preceding the formation of SLPMB stress the primordial nature of this goal.[30] The formal incorporation of the price stabilization function of the board was delayed until 1954 when the 1949 ordinance was amended by the board's creation of "a fund to be known as the Price Maintenance Fund and shall cause to be paid into such a Fund out of the funds at their disposal, the sum of 2 million pounds sterling to be used by the Board to assist in reducing the fluctuations in the market prices of produce by subsidizing the prices paid to producers by the Board."[31] Since the existing Stabilization Fund possessed £4.9 million, the creation of the Price Maintenance Fund reduced by three-fifths the fund accumulated by "underpayment" of producers and allocated implicitly for the subsidization of producers' prices.[32] The trustee relationship of the board to the producers posited in the introduction of the board's first annual report was thus somewhat impaired. That report had emphasized that

> as a result of war time experience, during which the Sierra Leone Government introduced a system of control . . . it was evident that it would not be in the best interests of the producer to revert to pre-war marketing conditions with the possibility of excessive price fluctuations. The main object of the Board is to provide, from any profits made, a Stabilization Fund for the benefit of the producer, by drawing therefrom to act as a buffer against the fluctuations of world prices or to utilise such profits for the benefit of the palm kernel and other produce industries. The Board therefore acts as trustees to the producer.[33]

30. See Bauer, *West African Trade*, pp. 268–269.

31. Ordinance No. 31 of 1954, para. 20 (1). The amendment fails to specify the time period over which prices are to be stabilized. Early discussions generally assumed that the price stabilization period would be short, i.e., less than one year (see Bauer, *West African Trade*, pp. 268–269). However, examination of the pricing policies of SLPMB made below will show that the stabilization period is asymmetrical; prices are stabilized longer during periods of rising prices than during periods of falling prices.

32. Of the £2.9 million released by the formation of the Price Maintenance Fund, £600,000 was granted to the Central Government's Development Fund and £400,000 to its Educational Fund. The remainder stayed with the board for its discretionary usage.

33. SLPMB, *Annual Report*, 1949, p. 1. *The Statement on Future Marketing of West African Cocoa*, Cmd. 6950, had contained a similar statement on cocoa marketing for Ghana and Nigeria: "It will be apparent from the above description of the Board's proposed method of operation that there will be no question of their making a profit at the expense of the West African cocoa producers. The Board will act as agents or trustees for the producers" (p. 8).

Subsequent annual reports of the board have deleted the reference to the trustee relationship and have de-emphasized the function of price stabilization by inserting the indefinite Paragraph 15 (1), quoted above, in place of the paragraph just quoted.

The composition of the board's membership prior to 1961 explains partially the de-emphasis of the trustee role of the board. From 1949 to 1961, the board consisted of eight members, of whom only three, appointed by the minister of natural resources, were to represent the producers. The governor appointed three other members without reference to background, and the Sierra Leone Chamber of Commerce and the African Chamber of Commerce nominated the remaining members. The government, in other words, judged that wholesalers, retailers, and other interested parties were more qualified to set producer prices than were the impersonal forces of the market.[34] In 1961 the producers gained an outward majority control of the board when the minister of natural resources was permitted to appoint three members representing the producers after consulting with the minister of trade and industry, but there is no guarantee that these members will "look out" more for the interests of the producer or the community as a whole than for their own special interests. A priori one would presume the opposite.

From an economic point of view, the paramount power of the board involves the statutory monopoly right "to buy produce and to store, transport, process, dispose of (whether within or without Sierra Leone) or export any produce bought by them and to engage in all other operations incidental or ancillary thereto; and to appoint agents to perform on its behalf any functions attached to the Board. . . ."[35] Consequently, unless either a domestic demand exists for the product or the opportunity costs of smuggling are low relative to the benefits to be derived, the producer must ultimately sell his produce either directly to SLPMB or to one of

34. The discussion above is another example of the so-called dumb bell hypothesis (first expounded by Professor John McGee of Duke University, I believe), which posits that the irrational actions of individuals must be countered by government intervention. It is somewhat strange that African governments have not yet accepted the pleadings of so many Western economists that their citizens are basically rational people where economic matters are concerned.

35. Ordinance No. 1 of 1949, para. 15 (2) a and b.

its licensed agents. As a corollary to this monopolistic export power, the board possesses the power to regulate the purchase price of agricultural produce handled by the board at both up-country buying stations and at the port of delivery, Freetown. At the same time, the board determines exportable commodity grades, sets price differentials for the various grades, and prohibits the exportation of produce falling below its minimum standards even though this produce could be sold in the world market. However, SLPMB must purchase in unlimited quantities "all produce of exportable quality."[36] As Bauer concludes, "from the producers' point of view the obligation to purchase all produce offered is of very limited significance only, especially in view of the absence of any reference in that guarantee to the prices the Boards have to offer."[37]

The powers of the board thus extend well beyond the original task of price stabilization and include many features which are entirely divorced from this original function.

2. *The Marketing Policies of SLPMB*

The prewar marketing facilities of British West Africa so universally criticized in the immediate postwar period consisted of various gradations of middlemen—working as commissioned agents of the exporting firms or as independent buyers—who purchased produce from the local farmers. In 1938 the Nigerian cocoa producers, fearing that major buying firms had colluded to lower the purchase price of cocoa, withheld their cocoa from the market. As a result of their actions, the British government appointed the Commission on Marketing West African Cocoa (the Nowell Commission) to investigate the marketing system. The commission denounced the existing marketing system as grossly inefficient and recommended the establishment of an export system very similar to the one in existence today.[38] However, neither

36. Ordinance No. 1 of 1949, paras. 15 (2) a and b and 29.
37. *West African Trade*, p. 278.
38. The dichotomy between the establishment of minimum prices through government control and the continuance of competitive forces was recognized by both the Nowell Commission and the African producers, but the commission allowed the alleged "inefficiency" of the existing marketing system to override this consid-

the Nowell Commission nor other investigating bodies recommended the reorganization of the mechanism whereby produce is purchased from individual farmers, so that the existing marketing system of Sierra Leone differs from the previous system in only one important aspect: the buyers of produce must now be licensed agents of SLPMB. These buyers are instructed by the board to purchase produce from the farmers on the board's behalf at prices not less than gazetted minimums. In return for these services the board allows the buying agents the minimum price payable to the producer; buying allowances—cost of bags, interest, middleman's commission, overhead expenses, and insurance and other financial charges; and the cost of transportation and certain incidental expenses as and when incurred by a licensed buying agent.[39]

Whether the producer actually receives the minimum price cannot be determined, as G. A. Petch notes:

> I cannot say accurately to what extent the price paid by the Board's agents to these traders is reflected in the price the traders pay to the farmer. A good deal of the information one gets on the subject is suspect—the only time I got a trader and literate farmer together there was a discrepancy in their statements of the price paid. There was the furthur [*sic*] difficulty that crops were being bought by volume not by weight and the volumes tended to be uncertain; in the case of palm kernels the amount accepted as a bushel varied from place to place from 62 lbs. to about 75. . . . There were also the frequent charges, which I was not in a position to prove or disprove, that the weighting machines used were false, or that the traders took advantage of the illiteracy of the farmers to name a weight other than the scales indicated.[40]

In other words, SLPMB, established to insure that the farmer receives a "fair" price for his crops, cannot guarantee that the

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eration. The commission noted: "It has been suggested that the Government should participate, either directly or in a supervisory capacity, in ascertaining and fixing a minimum price for cocoa based on world prices. . . . There is a strong feeling among the natives against any limitation of competition, a result that commonly follows from the fixing of minimum prices" (Great Britain, *Commission on Marketing West African Cocoa,* London: H. M. Stationery Office, 1938, p. 157).

39. Nnorom, *Sierra Leone Produce Marketing Board,* p. 53.

40. *Report on the Oil Palm Industry,* p. 118.

farmer will receive even its minimum price. If the farmer should receive the minimum price or more, he must credit the same competitive forces which the board was created to circumvent and/or the improvement of communication and transportation facilities, both of which are exogenous to the board's price policies. Since the board now licenses its buying agents and free entry into the industry no longer exists, one suspects that competitive forces, *ceteris paribus,* are weaker now than before the board was established.[41]

3. *The Pricing Policies of SLPMB*

This subsection examines the pricing policies of the Sierra Leone Produce Marketing Board from three separate but related points of view: (1) the theoretical substructure underlying the board's creation, (2) the historical pricing policies pursued, and (3) the effects of these pricing policies. It will be contended that the theoretical substructure is imprecise, that current pricing policies are basically tax-oriented, and that the board has distorted investment patterns.

a. *The theoretical substructure.* The overt *raison d'être* for the creation of SLPMB has been examined above, but several implicit underlying premises relating to price fluctuations merit examination. The most important of these premises are:[42] price fluctuations are harmful per se to primary producers; price fluctuations of the magnitude encountered during the interwar period deter long-run

41. The author asked the managing director of SLPMB, S. A. Jabati, if the board had ever considered unlimited licensing of buying agents. He replied yes, but everyone agreed that this would involve too much paper work! Moreover, to eliminate small buying agents they have established the policy that if any buying agent purchases less than 300 tons of produce in one year, his buying license will be revoked. Thus, 6 to 8 of the current 24 licensed agents will be dropped this year (interview March, 1965).

42. There are, of course, many implicit premises other than the three discussed here. Those discussed above have been selected because of their direct relationship to the output of primary producers. Other premises relating to terms of trade, diversification, and other similar problems are discussed in such articles as Boris C. Swerling, "Some Interrelationships between Agricultural Trade and Economic Development," *Kyklos,* XIV (Fasc. 3, 1961), 379–386, and the two symposiums on commodity stabilization in *Kyklos* for the years 1958 and 1959.

investment; price stabilization tends to remove random fluctuations in income trends. Each of these premises will be examined in turn.

Both advocates and adversaries of marketing boards are cognizant of the allocative role of relative price variations; they disagree, however, on the reliability of short-run price signals and the strength of the signal necessary to achieve desired effects. Advocates of marketing boards claim that "the signals given in raw material markets are frequently so misleading or extreme that it seems entirely legitimate to counteract them, even in a free market system."[43] They argue, in other words, that government or a semipublic body must mitigate unreliable and/or extreme short-run price fluctuations without obscuring long-run price trends which must be allowed to perform their allocative function.[44] However, from the producer's point of view, the adverseness of short-run price fluctuations is not so clear as was once believed. Walter Oi has demonstrated that where perfect competition exists, instability of demand and thus of price will lead to greater expected profits when firms maximize short-run profits and the marginal cost curves are positively sloped.[45] While his results apply if and only if output is instantaneously variable in the short run,[46] they do cast some doubts upon the validity of per

43. Henry C. Wallich, "Stabilization of Proceeds from Raw Material Exports," in Howard S. Ellis, ed., *Economic Development for Latin America* (New York: St Martin's Press, 1961), pp. 344–359. All quotations of the Wallich article are taken from the partial reprint in Meier, *Leading Issues in Development Economics,* pp. 393–399.

44. The arguments presented frequently jump between the long run and the short run, which tends to confuse the issue. For example, Wallich argues that the supply of some primary products may be so inelastic that surpluses may overhang a declining market for many years, thus further depressing the market ("Stabilization of Proceeds," p. 393). If this is in fact true, it is not clear how the stabilization of prices in either the short run or the long run will alleviate the excess supply. The real problems in such a situation involve the "equity" of reduced producer incomes, i.e., a distribution problem, which can be rectified more "efficiently" through direct transfers than through distorting relative price movements by pegging prices paid to producers.

45. Walter Y. Oi, "The Desirability of Price Instability Under Perfect Competition," *Econometrica,* XXIX (Jan., 1961), 58–64.

46. See Clem Tisdell, "Uncertainty, Instability and Expected Profits," *Econometrica,* XXXI (Jan.–April, 1963), 243–247, and Walter Y. Oi, "Rejoinder," *ibid.,* p. 248. Tisdell shows that if output is planned in advance and is unalterable, Oi's felicitous conclusion that "price instability is a virtue and not a vice" no longer holds. Oi's rebuttal develops a simple probabilistic model under which his conclusion still holds. The major problem with Oi's analysis, as he admits, is that the

se condemnations of short-run price instability, especially in cases where the conditions of the model are closely approximated in reality, e.g., palm kernels.[47]

In addition to the short-run output effects of price instability, advocates of marketing boards frequently refer to the longer-run investment effects of such volatility.[48] Henry Wallich elaborates this position quite clearly when he notes: "The same is to be said of the general sense of instability that permeates an economy dominated by raw material fluctuations. It moulds the economic climate, infuses uncertainty into all plans, and narrows the investment horizon. Economic development is the victim."[49] However, to the extent that Oi's analysis applies in a given situation and investment is a function of expected profits, price instability need not deter or dampen investment. Moreover, investment decisions may be asymmetrical with regard to price changes, i.e., producers may weigh "high" prices more than "low" prices, resulting in a "ratchet-type" investment process. Investment may therefore be undertaken when prices are high, even though prices may have been low in previous periods and may be low in future years.[50] The importance of these arguments is not so much that they reflect the actual investment decision process but that they emphasize our ignorance of the determinants of investment. Price instability may either promote or deter investment depending on the underlying investment function. A priori arguments concerning the

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variability of profits may increase the risks incurred by the firm and hence its costs of production. The solvency of the firm may also be threatened if randomly distributed price variations produce several consecutive periods of low prices.

47. Even in the case of such "permanent" crops as cocoa and coffee, output may be increased in the short run by the application of fertilizer and/or more intensive harvesting, *mutatis mutandis,* for a reduction in output.

48. See, for example, the comments of Ragnar Nurkse, "Trade Fluctuations and Buffer Policies of Low Income Countries," *Kyklos,* XI (Fasc. 1, 1958), 148, and H. W. Singer, "Introductory Statement: Symposium II on Stabilization and Development of Primary Producing Countries," *Kyklos,* XII (Fasc. 2, 1959), 275.

49. Wallich, "Stabilization of Proceeds," p. 394.

50. Sir Sydney Caine, "Instability of Primary Product Prices—A Protest and a Proposal," *Economic Journal,* LXIV (Sept., 1954), 610–614. In another article, ("Comment," *Kyklos,* XI, Fasc. 1, 1958, 187–193), Caine points out that extreme instability of prices for the primary products of Malaya and Indonesia did not restrict investment in these products. He argues that the adoption of the view that unstable prices deter investment implies that the producers under consideration are unable to make long-run assessments, which African and Asian experience in coffee, cocoa, and tea refutes.

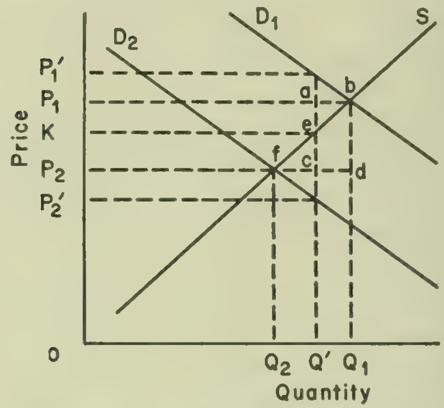

Figure I. ***Income Effects of a Price Stabilization Scheme***

beneficial aspects of price stability or instability are irrelevant without knowledge of the reaction of producers to price variations, their preferences between present and future income, and their willingness to bear risk.

Proponents of stabilization measures argue that the stabilization of prices prevents random variations in income when demand shifts are responsible for price changes, but it is not clear that the removal of such fluctuations is beneficial to producers. Consider, for example, the situation posited by B. S. Yamey and R. H. Snape[51] in which each of the following assumptions holds: (1) the marketing board has the sole right to export the commodity under consideration; (2) there are no domestic sales of the product; (3) no stores of the commodity are accumulated; (4) no surpluses of funds are accumulated over a two-period time span; and (5) supply is constant and linear, demand is linear, and demand shifts are parallel. In Figure I, let D_1 and D_2 represent demand curves for two separate periods and S the constant supply function during the two periods. It can now be demonstrated that if a buffer fund is instituted which will stabilize price during the two time periods and accumulate no surplus funds over the two periods, then total producer receipts (and total export re-

51. "A Diagrammatic Analysis of Some Effects of Buffer Fund Price Stabilization," *Oxford Economic Papers,* XV (July, 1963), 95–106.

ceipts) over the two periods are lower than if price were determined in the free market. Without the scheme producer receipts are $OP_1 \cdot OQ_1 + OP_2 \cdot OQ_2$ and with the scheme producer receipts are $2\ OK \cdot OQ'$. Because of the assumptions that the buffer fund breaks even over the two periods and D_1 and D_2 are parallel, K must be the arithmetic mean of OP_1 and OP_2; hence KP_1 and KP_2 are equal. Through the use of congruent triangles it can be shown that Q_2Q' must be equal to Q_1Q'; hence the area P_1eaK must be equal to $KecP_2$ and area $Q_2Q'cf$ equals $cd\ Q'Q$. Therefore, producer receipts without the scheme are greater by the area *abcd* (or $\frac{1}{2}\ Q_1Q_2 \cdot P_1P_2$) than with the scheme. These conclusions are vitiated if one introduces curvilinear demand and supply relationships and must be modified if domestic demand for the product exists, but the example serves the purpose of demonstrating that producers might be better off, depending upon their preference functions for income, without a buffer fund even in an ideal case where all finances accumulated by the fund are used for stabilization purposes. When producer prices are always pegged below world prices, as in the case of Sierra Leone, the merits of such a program as far as producers are concerned are even more dubious.

Thus the theoretical framework justifying the establishment of marketing boards is weak and imprecise. In each case, output and investment effects are indeterminate without detailed examination of the underlying functional relationships and without knowledge of producer preferences for present and future income.

b. ***History of the pricing and operating policies of SLPMB.*** The extent of the economist's knowledge concerning the relevant empirical relationships mentioned above prevents a priori approbations or condemnations of marketing board arrangements. Each marketing board must be judged within the context of its stated goals, the existing economic environment, and the alternative means whereby these stated goals can be achieved. The present section will review and analyze the pricing and operating policies of SLPMB in terms of these criteria. The existing agricultural

sector was described in the preceding chapter, and alternative measures will be discussed below. The major goals of SLPMB may be listed as: (1) the encouragement of production; (2) the buildup of stabilization funds "to stabilize produce prices should world prices fall"; (3) the accumulation of funds "required to finance schemes to promote increased production and the general benefits of producers and producing areas."[52] The analysis of this section will be largely confined to the two major agricultural exports controlled by the board, palm kernels and cocoa, since all other crops handled by the board have exhibited discontinuous export records, i.e., no other crops were exported by the board between 1957 and 1959.

Between 1947 and 1949 the West African Produce Control Board accumulated £1,364,226 in surplus funds from transactions in Sierra Leonean produce (primarily from the purchase and sale of palm kernels) which was transferred to the accounts of SLPMB upon its establishment. The results of SLPMB's palm kernel operations (summarized in Table 16) show that the funds transferred from WAPCB were augumented by large trading profits until 1952. Thereafter, trading "losses" were incurred in five of the ensuing years and profits were made in six years; but the overall results of the palm kernel trade show net trading profits of £3,515,600 for the fifteen-year period. At the same time, the government levied export duties on palm kernels which reached an absolute peak in 1952 when the collection was £861,300;[53] total export duty receipts for the fifteen-year period are £4,524,900. These duties have been subtracted from export re-

52. These goals are taken from a policy statement in SLPMB, *Annual Report*, 1950, p. 4. The financial secretary of Sierra Leone stated in 1952 that prices paid by SLPMB were also used to control inflation. He noted that "the prices now being paid to farmers are near the maximum that could be paid without causing inflation and they are sufficient to encourage and preserve the economic stability of Sierra Leone, and they represent, having regard to the prices of imports, a considerable advance on pre-war prices" (Sierra Leone, *Legislative Council Debates*, Session 1951/52, Freetown: Government Printer, 1953, I, 188).

53. From 1949 to 1951 the export duty on palm kernels was 6 per cent ad valorem. The rate jumped to 14 per cent plus 1 per cent for each £3 above £44 F.O.B. selling price up to a maximum of 20 per cent for the years 1952–56. Between 1956 and 1958 the payment was £4 per ton, but the rate jumped to 12.5 per cent ad valorem in 1959. In 1962 the rate was lowered to 5 per cent ad valorem (Sierra Leone, *Trade Report*, 1950–63). It appears from Table 21 that the government varies the export duty according to the price level of palm kernels.

Table 16. ***Producer receipts, export duties, and profit or loss on palm kernel operations by SLPMB: 1949–63 (£000)***

Year	Producer receipts	Export duties	Profit or loss on operations
1949	691[a]	58.6	418.3
1950	1,871	162.0	600.3
1951	2,192	258.7	1,168.9
1952	2,400	861.3	259.1
1953	2,200	633.2	59.7
1954	2,170	526.6	−91.5
1955	1,660	351.3	−93.7
1956	1,680	327.2	−27.6
1957	1,530	207.8	11.5
1958	1,523	218.5	137.2
1959	1,660	232.7	229.4
1960	1,720	358.5	315.4
1961	896[b]	151.4[b]	−108.4[b]
1962	1,980[c]	71.9[c]	−126.8[c]
1963	1,469	115.2	250.3

a. August–December.
b. January 1–June 30, 1961.
c. This year and succeeding years, July–June.
Source: SLPMB, *Annual Report*, 1949–63.

ceipts before calculating profits or losses. Table 16 also indicates that total producer receipts have moved in a cyclic pattern during the fifteen-year period and that export receipts have fluctuated in a similar but more volatile pattern.

Tables 17 and 18 provide essentially the same information as Table 16 except that all figures are now presented on a £-per-ton basis and two extra columns have been inserted depicting the difference between the average annual market prices received by SLPMB and the average annual C.I.F. price prevailing in Europe for West African palm kernels. The difference between the two figures will be termed under-realization following the usage of P. T. Bauer, but the term as used here has a much different meaning than as applied by Bauer.[54] He indicates that the major difference between the two figures can be accounted for by bulk future or contract sales on the part of the marketing boards below prevailing market prices. There is no indication in the literature

54. *West African Trade,* pp. 287–294.

Table 17. *Producer prices, selling prices, and levies on palm kernel producers: 1949–63 (£ per ton)*

Year	Producer price	Export duties	Operating costs	Profit or loss on operations	Under-realization	Price received by SLPMB	Palm kernel prices C.I.F. Europe
1949	21.23	1.80	7.71	14.65	4.26	44.79	49.05
1950	28.90	2.50	4.60	9.27	7.87	41.13	49.00
1951	28.90	3.41	10.61	15.41	8.17	58.33	66.50
1952	31.63	11.35	12.39	3.42	6.71	58.79	65.50
1953	31.63	9.10	12.00	0.86	10.41	53.79	64.00
1954	31.63	7.74	10.23	−1.34	4.84	48.26	53.10
1955	28.90	6.09	9.57	−1.63	8.77	42.93	51.70
1956	28.90	5.63	9.34	−0.47	9.40	43.40	52.80
1957	28.90	3.99	9.23	0.22	8.86	42.34	51.20
1958	28.90	4.00	9.41	2.41	11.18	44.82	56.00
1959	28.90	4.15	11.04	13.91	12.20	58.00	70.20
1960	31.60	6.58	9.55	5.79	7.88	53.52	61.40
1961	31.60	5.40	10.10	−3.87	6.37	43.23	49.60
1962	31.60	1.18	10.81	−2.67	8.58	40.92	49.50
1963	27.20	2.05	8.89	4.45	12.91	42.59	55.50

Sources: SLPMB, *Annual Report,* 1949–63; FAO, *Production Yearbook, 1963,* p. 324; FAO, *Monthly Bulletin of Agricultural Economics and Statistics,* XIV (April, 1965), 49.

Table 18. *Producer prices, selling prices, and levies on palm kernel producers: 1949–63 (as a percentage of C.I.F. prices, Europe)*

Year	Producer price	Export duties	Operating costs	Profit or loss on operations	Under-realization	Producer price as a percentage of sales proceeds	Palm kernel prices C.I.F. Europe
1949	43.3	3.7	15.7	30.0	8.7	47.2	100
1950	59.0	5.1	16.7	18.9	16.1	70.2	100
1951	43.5	5.1	15.9	23.2	12.3	49.5	100
1952	48.3	17.2	18.9	5.2	10.2	53.8	100
1953	49.4	14.2	18.8	1.3	16.3	59.0	100
1954	59.6	14.6	19.3	−2.5	9.1	65.5	100
1955	55.9	11.8	18.5	−3.2	17.0	67.3	100
1956	54.7	10.7	17.7	−0.9	17.8	66.6	100
1957	56.4	9.4	18.0	0.4	17.3	68.3	100
1958	51.6	7.1	16.8	4.5	20.0	64.5	100
1959	41.2	5.9	15.7	19.8	17.4	49.8	100
1960	51.5	12.3	15.6	9.4	12.8	59.0	100
1961	63.7	12.5	20.4	−7.8	12.8	73.1	100
1962	64.2	2.9	21.8	−5.4	17.3	77.2	100
1963	48.8	4.8	16.0	8.0	23.3	63.3	100

Source: Table 17.

dealing with SLPMB that its sales are made on a predetermined basis; rather, the difference appears to be largely attributable to SLPMB's reporting its gross proceeds and costs on an F.O.B. basis while European prices are quoted C.I.F. The importance of under-realization as used by Bauer may have been greater during the early fifties when the Ministry of Food still purchased a large portion of West African palm kernels at fixed prices, but the amount of such a discrepancy between C.I.F. prices and the reported price received by SLPMB cannot be directly ascertained from the available data. In any case, the European C.I.F. price is used here solely as a means of approximating the actual C.I.F. price received for Sierra Leonean palm kernels. The use of such a figure seems more appropriate for estimating the extent of the levies on producers than a price known to be 15–20 per cent below prevailing world price figures.

The stated goal of stabilizing producer prices has been achieved, as evidenced from Table 17. Prices have varied only five times in the fifteen-year history of the board and remained unchanged during the five-year period 1955–59. The stability of prices, however, was accomplished by setting producer prices well below current year market prices. From Table 18, it can be seen that producers received less than 50 per cent of current year market prices in five of the fourteen years for which figures are available, and in only four years did the percentage approach or exceed 60 per cent. If the percentages are computed on the basis of sales proceeds, the extent of the levy on producers is mitigated but still averages 58 per cent. As a result of the establishment of low producer prices relative to world market prices, SLPMB has been able to accumulate surpluses on its palm kernel operations. In 1949, these surpluses amounted to 30 per cent of the price of each ton sold, and reached 19, 23, and 20 per cent in the years 1950, 1951, and 1959. At the same time, export duties were levied on palm kernels, the amount of which appears to move inversely with surpluses, i.e., "high" surpluses per ton appear to be associated with "low" export duties per ton. It is also significant that in only one year, 1962, was the sum of surpluses per ton and export duties per ton a negative number, which indicates that producers

have been "subsidized" in only one year. In all other years, a positive levy has been made upon producers in their capacity as exporters. Thus, the stated policy of subsidizing producers in periods of low prices from surpluses accumulated in "high" price years has, in fact, been put into practice in only one year. In all other years, the board has served as a mechanism for taxing producers either for the benefit of the general revenue and/or SLPMB.

The long-term rigidity which has characterized producer prices of palm kernels is not prevalent in the pricing of cocoa. During the period 1949–55 when world cocoa prices were rising, SLPMB increased the price paid for each grade of cocoa. Grade I prices rose from a low of £93.34 in 1949 to a high of £261.34 for the 1954/55 crop season, remained at £186.67 during the period 1956/57–1959/60, and decreased steadily to £121.34 for the 1962/63 crop year.[55] The prices of other grades have followed similar patterns.

The existence of differential prices for cocoa and the failure of SLPMB to report tonnage purchased by grade renders the construction of tables similar to those for palm kernels exceedingly difficult. Producer receipts cannot be estimated by multiplying the tonnage of cocoa purchased by producer prices or even a weighted average of producer prices, since no satisfactory method of weighting can be devised without knowledge of the tons of each grade purchased. Instead, the estimate of producer receipts must be based on SLPMB's reported purchase costs, which include the costs of moving cocoa from upcountry buying stations to Freetown. As a result, all estimates of producer receipts in Table 19 are overstated. The aberrations this estimating technique may cause are illustrated by the fact that under this estimating system the highest price paid to producers came in 1956. The highest producer price set by the board came in 1954/55, as mentioned in the paragraph above. In addition, the amount of levies on producers is distorted for the years 1954–60 by fluctuations in the stockpile of cocoa held by SLPMB. Such fluctuations may result in overestimation or underestimation of profits or

55. SLPMB, *Annual Report*, various years.

losses on current operations depending on whether the stockpile is increasing or decreasing.

Because of the problems discussed above, a special column has been constructed in Table 19 which is labeled "Residual." This column represents the algebraic difference between the export receipts column and the other three columns. One would expect that the residual contains overseas freighting costs and insurance, but the extreme variability of the column indicates that it is picking up fluctuations from the stockpiling of cocoa as well. For example, the only year when the residual is negative coincides with the reduction of the stockpile of cocoa from 984 to 572 tons. As a result, losses for the year are understated, which is picked up by the residual column.

Table 19. ***Producer receipts, export duties and receipts, operating costs, and profit and loss on operations in cocoa: 1949–63** (**£ per ton and as a percentage of export receipts per ton**)*

	Producer price		Export duties		Profit or loss on operations		Residual		Export receipts
Year	£ per ton	Percentage	£ per ton	Percentage	£ per ton	Percentage	£ per ton	Percentage	£ per ton
1949	72.5	37.0	0	0	123.3	63.0	0.2	0	196.0
1950	73.6	38.2	0	0	118.2	61.4	0.8	0.4	192.6
1951	123.8	45.7	16.2	6.0	125.2	46.2	2.9	1.1	270.9
1952	148.6	57.0	51.8	19.9	53.4	20.5	7.1	2.7	260.9
1953	160.9	70.2	45.0	19.6	10.1	4.4	13.2	5.8	229.2
1954	161.8	42.3	76.5	20.0	94.5	24.7	49.6	13.0	382.4
1955	211.4	68.1	57.0	18.4	−14.9	− 4.7	57.1	18.4	310.6
1956	258.7	129.6	31.3	15.7	−57.0	−28.6	−33.4	−16.7	199.6
1957	192.4	100.3	22.0	11.5	−32.2	−16.8	9.6	5.0	191.8
1958	189.8	61.5	64.4	20.9	39.0	12.6	15.3	5.0	308.5
1959	176.5	65.1	46.1	17.0	21.6	8.0	27.0	10.0	271.2
1960	187.1	87.3	21.8	10.2	−12.2	− 5.7	17.5	8.2	214.2
1962	159.8	98.9	2.4	1.5	− 9.1	− 5.6	8.7	5.4	161.8
1963	130.4	81.3	8.8	5.5	16.4	10.2	4.7	2.9	160.3

Source: SLPMB, *Annual Report*, 1949–63.

From Table 19, it is evident that a large proportion of export receipts were initially diverted from cocoa producers to the accounts of SLPMB, e.g., 63 per cent in 1949 and 61 per cent in 1950. From 1951–56, producers were permitted to retain increasing percentages of the cocoa-selling proceeds, and in both 1956 and 1957 average annual purchasing costs exceeded the average

annual selling price.[56] The sharp increase in the price of cocoa in 1957 and 1958 reversed these losses without reductions in the price paid to producers, but the precipitous drop in prices between 1960 and 1962 forced the board to reduce producer price for each of the crop years 1961/62 and 1962/63. Despite substantial losses in certain years, SLPMB netted £573,800 on its cocoa operations during the fifteen-year period and the government augmented its export revenues by £1,037,800.

In summary, SLPMB attempted to provide price incentives for cocoa producers when world price levels were rising but has also permitted prices to fall since the mid-fifties in line with downward trends in world cocoa prices. In two years, 1956 and 1957, SLPMB appears to have actually subsidized the price paid to producers, but on the whole the board has acted as a tax mechanism.

The role of SLPMB in the Sierra Leonean economy has been rapidly extended since Independence into non-stabilization areas. Before Independence, the subsidiary operations of SLPMB were confined to the operations and maintenance of nine Pioneer Oil Mills; but the board is now in the process of expanding into areas including:

1. The construction and operation of all plantations sponsored by the government. This includes the rubber plantations discussed earlier, as well as plantations for the growth of avocados, pears, bananas, citrus, coconuts, oil palms, and pineapples.[57]
2. The operation of the following industries: soap factory; palm kernel mill; instant coffee factory; groundnut, benniseed, and copra crushing mill; cushion, rope, and mattress factory; animal foodstuffs factory.[58]

In anticipation of the raw material requirements of several of the industries to be operated by the board, the government has

56. As stated earlier, the estimated average annual price paid to producers in 1956 is obviously exaggerated, but without access to the accounts of SLPMB it is impossible to determine the amount or nature of the distortion.

57. The board currently controls 7,000 acres of plantations. The present program envisages a 63-fold expansion to 440,000 acres.

58. "Sierra Leone Produce Marketing Board," *Sierra Leone Trade Journal,* V (April-June, 1965), 70.

recently extended the list of commodities which can be exported only by SLPMB to include piassava, maize, pigeon peas, and guinea corn. The last three products have never been exported in quantity, and one would assume that their inclusion merely gives the board the right to trade in these commodities. Since the products are consumed domestically, it would appear that the board will have to pay producers the going market rate if sufficient supplies are to be available for its industrial activities. However, the entire output of piassava was formerly exported, and the right of the board to set producer prices may have important effects upon producer income and physical output.

The rapid extension of SLPMB's activities into the actual production and processing of agricultural produce appears to result from two factors: (1) the possession of "surplus funds" by a large bureaucratic organization interested in enhancing its own power and prestige and (2) the desire to justify the 1949 decision to operate the nine Pioneer Oil Mills. The pricing policies of SLPMB resulted in the accumulation of surplus funds which were invested primarily in British Government Securities;[59] in 1954 the existence of such funds resulted in governmental pressure on the board to transfer a part of the funds to the development and educational funds. As one member of the Legislative Council argued, "Now no-one in this House can say that after one has built up a fund over several years there is any sense of seeing the fund standing idle and not looking after it. The time must come when you will say 'I want to build a house. I want to go into such and such an industry.' It means you are putting the money for useful purposes rather than keeping the money idle."[60] The result of the council debates was the formation of the Price Maintenance Fund, noted earlier, and the transfer of £ 1 million to the accounts of the government. Since Independence, similar proposals have been made which if granted would reduce the role of SLPMB to that of tax collector. In order to avert such a degradation, SLPMB has been forced to advocate projects which would

59. The latest annual report of SLPMB (1963) shows that 52.9 per cent of its total assets of £4.23 million was held in British government securities. Another 11 per cent was held in Sierra Leone government securities (SLPMB, *Annual Report*, 1963, pp. 13–14).

60. Quoted in Petch, *Report on the Oil Palm Industry*, p. 124.

remain under its control, such as those listed above.[61] It is interesting to note that the literature fails to reveal the standard argument that Sierra Leone should process its own national resources; rather, the projects are advocated from the point of view that the "new industries . . . will process and/or manufacture local goods and foods to help Sierra Leone's balance of payments and provide more jobs to ease the problem of unemployment."[62] The existence of these problems is regrettable, but their elimination does not in and of itself justify the investment decision. This decision should be motivated by the criterion of profitability, and any other motivation, assuming external economies are insignificant, will result in a malallocation of resources.[63] However, the perpetuation and enhancement of a bureaucratic machine has and will continue to override economic considerations.

The second point concerning the extension of SLPMB's activities is that the establishment of plantations owned and operated by SLPMB appears to be an attempt to justify the board's 1949 decision to assume control of the Pioneer Oil Mills being set up by the Department of Agriculture.[64] The board constructed nine of these mills, and only one of them, Masanki, has ever operated at a profit; total losses on their operation until 1963 amounted to over £646,000.[65] The board has reiterated in many of its annual reports that the mills are unprofitable as a result of "uneconomical operation due to insufficient supplies of fruit and the short working

61. The obviation of such intrusions also appears to follow the A. Alchian and R. Kessel hypothesis concerning the maximization of utility rather than profits. They point out that it is a "cardinal sin of a monopolist to be too profitable" which may result in regulated and unregulated monopolies seeking to maximize utility because of this constraint. This may result in expenditure by the firm on such nonpecuniaries as thick carpets and pretty secretaries ("Competition, Monopoly, and Pursuit of Money," *Aspects of Labor Economics*, National Bureau of Economic Research Special Conference Series, XIV, Princeton, N.J.: Princeton University Press, 1962, 157–175). The author was struck by the applicability of this hypothesis when seven or eight doormen participated in the process of ushering him into the most lavish office building encountered in Sierra Leone.

62. "Sierra Leone Produce Marketing Board," *Sierra Leone Trade Journal*, p. 70.

63. See the comments of Simon Rottenberg, "Economic Policy in the Poor Countries," *Journal of Law and Economics*, II (Oct., 1959), 141–146. Rottenberg effectively counters both of the arguments given above.

64. These mills were part of the Childs Plan for the economic development of Sierra Leone. The Department of Agriculture had planned to operate them, but it was felt that SLPMB was best qualified because of its surpluses (Childs, *A Plan of Economic Development*, p. 20).

65. SLPMB, *Annual Report*, 1949–53.

season; to high operating and overhead costs and heavy depreciation charges for Mill equipment; the price paid to producers is also too high in relation to the value of the products, palm oil and kernels, for these Mills to pay their way."[66] But the conclusion that SLPMB should establish plantations to correct the deficient fruit supply is a *non sequitur;* the "best" allocation of resources might entail the complete elimination of the mills and the employment of the available funds in an entirely different sector. However, SLPMB does not appear to be aware of the concept of alternative costs.[67]

In conclusion, the board has extended its activities into areas unthought of when the board was established. In fact, the board now appears to feel that its role as a price stabilizer is subordinated to its other activities, as implied in the following statement concerning the construction of a plantation at Mange Bureh in light of a governmental refusal to permit reductions in producer price: "It would be most inadvisable to enter into a scheme of this magnitude, calling for an out of pocket outlay at peak of about £1½ million, *if the Board's available cash resources are to be used for large scale price support.*"[68]

c. ***The economic effects of the pricing and operating policies of SLPMB.*** The economic effects of marketing boards and the equity problems involved in their operation have been much discussed since the early fifties, so that the present section may be limited to two crucial problems: (1) the output and (2) the growth effects of SLPMB.[69] These effects would be best treated in a general rather than a partial equilibrium framework, but the

66. *Ibid.*, 1955, p. 4.

67. S. A. Jabati, the managing director of SLPMB, justified the establishment of plantations around each of the mills solely on the basis of the "educational benefits" that such efficiently operated plantations would have on the neighboring farmers.

68. *Minutes of the Seventeenth Meeting of the SLPMB, Held at the Board Offices, at the Queen Elizabeth II Quay, Freetown* (Freetown: mimeographed, Sept. 6, 1961). Italics supplied.

69. See, for example, P. T. Bauer, *West African Trade,* chap. xxiii; P. T. Bauer and B. S. Yamey, *The Economics of Underdeveloped Countries* (London: Cambridge University Press, 1957), chap. xiii; A. R. Prest, *Public Finance in Underdeveloped Countries* (New York: Praeger, 1962), pp. 69–73; Gerald K. Helleiner, "The Fiscal Role of the Marketing Boards in Nigerian Economic Development, 1947–61," *Economic Journal,* LXXIV (Sept., 1964), 598–603; and the two symposiums on stabilization measures in *Kyklos,* 1958 and 1959.

necessary explicit model of the economy is lacking and most of the available information is qualitative rather than quantitative. Therefore, the problems will be treated with the aid of partial equilibrium tools.

In Chapter 2, Section E, the price elasticity of supply of the leading export crops was examined. The regression on the time-series data indicated that the long-run price elasticity of these products was positive; hence, if SLPMB set producer price below the level that would have prevailed in a free market system, output would be restricted.[70] The extent to which output is restricted depends only upon the price elasticity of supply when producer price is established by a statutory marketing board. As indicated in Chapter 2, the elasticity of supply for Sierra Leonean agricultural export crops would appear to range between .5 and 1; hence the resources released by pricing below market prices will not be insignificant. The resources thus released should flow into (1) the production of untaxed commodities (whether domestically consumed or exported) and/or (2) the smuggling of taxed goods. In other words, the export tax and the marketing surpluses, which may be treated as an export tax, drive a wedge between the price received by the marketing board and the price received by the private sphere, causing both an income and a substitution effect.[71] Thus, one should be able to observe in the data a shift in production toward subsistence crops or untaxed commodities and a decline in the country's share of the world market for taxed goods.[72] However, even if these phenomena are observed, a causal

70. It is impossible to prove that SLPMB has in fact paid lower producer prices than would have prevailed in a free market system, but a prima facie case for such a conclusion exists—over a period of time, licensed buying agents of SLPMB have received a "fair" rate of return on their operations, i.e., about 10 per cent. SLPMB has simultaneously accumulated surpluses over and above these returns. Under a free market with no barriers to entry, the surpluses of SLPMB would have been eroded through the competitive process. Rates of return in both trading and farming would tend to equalize, and the average price paid to farmers would increase relative to the price paid by SLPMB.

71. The elasticity of demand determines the total loss of export receipts and gross domestic product as a result of the contraction in supply, but the demand curve facing the country is no longer relevant for private interests. They are confronted with an infinitely elastic demand curve at the price set by the marketing board.

72. The inconsistency between levying export taxes on agricultural products and admonishing farmers to stay on their land apparently has not been noted by the Sierra Leonean government.

relationship is not established; but support is given to the hypotheses.

In Tables 8, 9, and 10, physical output for the export sector and the "subsistence" sector are detailed. The tables reveal that the output of all subsistence crops has either increased or remained constant since 1950, while only the production of coffee and cocoa has increased in the export sector. It must be remembered, however, that coffee was not under the control of SLPMB from 1952 to 1960 (and that when coffee was controlled by SLPMB before 1952, almost the entire crop was smuggled out of the country each year) and that SLPMB has permitted rather wide fluctuations in cocoa prices. Thus, as a consequence of SLPMB's pricing policies, it is suggested here that Sierra Leonean farmers have found "subsistence" farming more profitable than "export" farming; consequently a reallocation of resources toward subsistence farming and away from export farming has occurred. Stated more formally, the substitution effect of SLPMB's pricing policies has outweighed the income effect, and there has been a "tendency to retreat into the subsistence sector"[73] since the creation of SLPMB. Thus, rather than promoting agricultural exports, SLPMB has actually inhibited these exports and has fostered the type of farming its creators thought it would reduce.

In regard to Sierra Leone's share of the world market, Table 20 shows that the country's share of the world palm kernel market has declined from a high of 8.5 per cent in 1951 to approximately 6 per cent in 1962/63. One might have expected a greater drop, but the constancy of world output over the observed period prevented a more severe decline. It is, however, significant that when the figures are examined on a regional basis the output of Africa as a whole has decreased by approximately 100,000 tons, while the production of Latin America and the Far East has increased. The importance of this observation stems from the fact that Nigeria (which produces almost half of Africa's output) and most of the other African countries possess a marketing board system similar to that of Sierra Leone. The existence of such boards may

73. Prest, *Public Finance in Underdeveloped Countries,* p. 67.

Table 20. *Comparative palm kernel production statistics: 1950–1962/63*[a] *(000 metric tons)*

Year	World	Sierra Leone	Africa	Latin America	Far East
1950	960	71.3 (7.4)	830	90	42
1951	880	75.1 (8.5)	740	100	42
1953/54	970	68.9 (7.1)	810	100	55
1955/56	960	57.6 (6.0)	780	120	57
1957/58	990	53.0 (5.4)	790	140	55
1959/60	1,040	57.5 (5.6)	840	150	53
1961/62	1,040	57.8 (5.6)	800	180	59
1962/63	980	61.0 (6.2)	730	190	61

a. The percentage of total world production of palm kernels produced by Sierra Leone is shown in parentheses beside Sierra Leone tonnage figures.

Source: FAO, *Production Yearbook*, 1950–64.

actually act as a stimulus to production in unregulated economies to the detriment of the regulated economies.

The adoption of marketing board arrangements is currently advocated on the basis of mobilizing resources for development, and M. Bye has pointedly stated, "Indeed the stabilization demands of poor countries can be justified only by reference to the aim of growth which these countries for the most part have in mind."[74] The argument generally begins with the difficulty of assessing primary producers with any form of taxation other than indirect taxes and then proceeds to the small proportion of the extra income that the farmer would save and invest if the board did not exist. The employment of these funds by the government or the marketing board is then compared with their use by the peasant proprietors and found to be good. Gerald Helleiner, in his recent examination of the disposition of the marketing surplus of the Nigerian boards, concluded:

The disposition of Marketing Board surpluses may not have been perfect, but the rates of return from their investments in research, roads, agricultural schemes, universities, modern manufacturing plants and so forth are unlikely to have been any lower than those on housing, sewing-machines, land clearing and other small-scale outlets for peasant funds discussed above, let alone so much lower to offset the

74. "Comment," *Kyklos*, XI (Fasc. 1, 1958), 181.

difference between consumption ratios. It can therefore unambiguously be stated that Nigerian development has been aided through the device of channelling a portion of its export earnings via the Marketing Boards away from the producer to other (governmental) decision-makers.[75]

Leaving aside (1) the welfare implications of changing the consumption and investment patterns of private individuals and (2) the employment of such funds for public goods, it is not clear that the planned usage of SLPMB's surplus funds will be an "unambiguous" improvement over private usage. In the paragraphs above, it has been shown that in the process of accumulating the surplus funds, there has occurred a transfer of resources away from export production, a sector in which Sierra Leone's comparative advantage presently appears to lie.[76] The resources released as a result of SLPMB's actions have flowed into subsistence production, smuggling, and the construction of processing facilities and plantations—enterprises that have been shunned in the past by both domestic and foreign investors, indicating that the rate of return on these investments is relatively low. In addition, SLPMB rationalizes its investment decisions on the basis of balance of payments and employment benefits rather than profitability. As a result, unless substantial external economies arise from these investments, it would appear that the board's actions have or will reallocate resources away from the sector upon which the future development of the economy depends and toward less productive activities. Even if the board can demonstrate that its projects are more profitable than those undertaken by private farmers, it should not finance these projects solely through export taxes unless all other alternative means of taxation result in greater malallocation of resources. In any case, the projects of the board should be integrated into the general investment plans of the government rather than originating in isolation and without reference to any type of investment criteria; as a corollary to this statement, it must be doubted whether a semiautonomous agency such as SLPMB should ever be granted taxation rights unless its revenues are thoroughly integrated with the cen-

75. "Role of Marketing Boards in Nigerian Development," p. 603.
76. This does not imply that in the future Sierra Leone's comparative advantage will lie in agricultural production.

tral government's accounts. The failure of the Sierra Leonean government to provide these safeguards may delay indefinitely the complete emergence of a market-oriented agricultural sector.

Conclusion

At present, the Sierra Leonean retail and wholesale trades are dominated by expatriate firms. And while expatriates are fewer in number than their Sierra Leonean counterparts, it is estimated that they handle in excess of 50 per cent of the total value of internal and external trade. The belief that the absolute amount of trade is fixed and immutable has led the Government to seek actively to reduce expatriate participation in retail but not wholesale trade. Little or no consideration has been given to the economic consequences of these actions or to alternative measures of achieving the desired results.

In the export field, the SLPMB possesses a statutory monopoly right to be the sole exporter of the major agricultural products. This board, formed in 1949 for the ostensible purpose of stabilizing producer prices, has constantly extracted "surpluses" from the producers. In recent years, these surpluses have been used to enhance the power and prestige of SLPMB by extending the range of SLPMB's activities. SLPMB no longer considers the stabilization of producers' price to be its major function; instead, it attempts to accumulate surpluses in order to construct new plantations and processing facilities. The net effect of SLPMB's pricing policies has been the stimulation of subsistence production at the expense of export production and the malallocation of resources between agricultural production and agricultural processing. As a result, the growth of the agricultural sector has been reduced from what it would have been had the board not existed or had the board permitted producer price to follow world market prices closely. There is little prospect that the past policies of the board will be reviewed or revised; indeed, it appears that the strength of the board will increase in the future.

• 4 •

The Mining Sector

Before the Alluvial Diamond Mining Ordinance and Rules of 1956 legalized licensed diamond mining by native Sierra Leoneans, the mining industry of Sierra Leone was controlled by large, highly capitalized foreign firms producing solely for the export market. Each of the expatriate firms possessed exclusive rights to mine, prospect for, and market a designated mineral (or minerals) within an area delineated by the government, and these rights were largely unchallenged before the mid-fifties.

Before 1929, the exports of Sierra Leone consisted solely of agricultural or agriculturally related products,[1] but the discovery and subsequent mining of diamonds, iron ore, chrome ore, gold, and other mineral products has resulted in an almost complete reversal of the share of the export market held by the agricultural and mining sectors. Table 21 reveals that the mining sector expanded its share of total Sierra Leonean exports from 44.5 per cent in 1950 to 84.9 per cent in 1964 following (1) the 17 per cent average annual rate of growth of the value of mining exports (from £2.965 million in 1950 to £27.202 million in 1964) and (2) the absolute decline in the value of agricultural exports over the same period. As a result, depending upon which estimate of gross domestic product is used, 20–40 per cent of the gross domestic product of Sierra Leone is derived from the mining sector.[2] The purpose of this chapter is to describe and analyze the leading mining activities, diamonds and iron ore, and to examine the role of the government in this sector of the Sierra Leonean economy.

1. See the *Blue Book* of Sierra Leone for the years before 1929.
2. See the discussion of the gross domestic product of Sierra Leone in the Introduction.

Table 21. ***Value and quantity of mineral exports: 1950–64***

Year	Diamonds: Quantity (000 carats)	Diamonds: Value (£ 000)[a]	Diamonds: Price per carat	Iron ore: Quantity (000 tons)	Iron ore: Value (£ 000)[a]	Iron ore: Price per ton	Value of total mineral exports (£ 000)[b]
1950	638	1,566 (52.8)	2.4	1,143	1,276 (43.0)	1.1	2,965 (44.5)
1951	477	1,372 (45.9)	2.9	1,185	1,481 (49.5)	1.3	2,992 (30.4)
1952	423	1,217 (32.3)	2.9	1,379	2,227 (59.4)	1.9	3,750 (37.9)
1953	417	1,198 (20.3)	2.9	1,200	4,345 (73.5)	3.9	5,913 (50.5)
1954	444	1,700 (37.0)	3.9	877	2,707 (58.9)	3.1	4,599 (41.9)
1955	401	1,400 (26.4)	3.5	1,322	3,709 (70.0)	3.0	5,304 (53.4)
1956	684	3,457 (45.1)	5.4	1,328	4,003 (52.3)	3.1	7,660 (63.2)
1957	683	6,425 (58.5)	7.5	1,445	4,380 (40.0)	3.1	10,975 (73.1)
1958	1,490	7,184 (61.0)	4.8	1,423	4,490 (38.1)	3.1	11,789 (71.3)
1959	1,205	6,809 (62.2)	5.8	1,503	4,096 (37.4)	2.7	10,955 (66.8)
1960	2,055	16,482 (79.4)	8.0	1,540	4,135 (19.9)	2.6	20,764 (80.0)
1961	2,045	15,969 (73.2)	7.8	1,758	5,753 (26.4)	2.7	21,812 (86.7)
1962	1,158	7,109 (57.7)	6.1	1,983	5,117 (41.5)	2.6	12,320 (74.0)
1963	1,739	16,165 (75.9)	9.3	1,954	5,007 (23.5)	2.5	21,286 (83.7)
1964	1,650	21,869 (78.5)	13.2	2,050	5,228 (21.3)	2.6	27,202 (84.9)

a. Percentage of the total value of mineral exports given in parentheses below value figure.
b. Includes value of chrome ore, platinum, gold, columbite, and bauxite exports. Mineral exports as a percentage of all exports given in parentheses below value figure.
Sources: Sierra Leone, *Quarterly Statistical Bulletin,* No. 3 (Sept., 1964), pp. 38–40, and *Sierra Leone Trade Journal,* 1964/65.

A. Diamonds

The development of the Sierra Leonean diamond industry may be separated into two distinct phases: (1) the period during which the Sierra Leone Selection Trust (SLST) retained exclusive rights to the diamond industry and (2) the period since the enactment of the Alluvial Diamond Mining Scheme in 1956 which

legalized native participation in the diamond industry. Each of these periods will be examined in turn.

1. *The Sierra Leone Selection Trust*

In 1930 a geological survey team discovered alluvial diamonds in the Gboboro Stream of Kono District, but the collapse of the diamond market in the same year delayed immediate investigation of this area.[3] In 1931 the Consolidated African Selection Trust (CAST) obtained from the Sierra Leonean government an exclusive license to prospect 4,170 square miles in the vicinity of the initial discovery, but the prospecting team found insufficient deposits to justify large-scale mining operations.[4] The prospectors, however, reported substantial diamond deposits within the Bafi-Sewa river system (primarily in Kono and Kenema districts), and on the basis of this report CAST negotiated an exclusive prospecting license for the whole of Sierra Leone. Mining operations began on a small scale in 1932, and CAST continued to prospect the Bafi-Sewa river system under its exclusive prospecting license.

In 1934 CAST renegotiated its agreement with the Sierra Leonean government, and the terms of the new license (Ordinance No. 22 of 1935) extended CAST's monopoly rights to include the production and marketing of all Sierra Leonean diamonds, excluding only the areas of the Marampa Iron Ore Concession and the Tonkolili Permanent Lease. In return, CAST agreed to pay a 27.5 per cent tax on its net profits plus a £7,000 per annum mineral rent and to establish a subsidiary, SLST, to operate the Sierra Leonean leases.[5]

The output of diamonds began on a limited scale (as shown in

3. See Theodor Gregory, *Ernest Oppenheimer and the Economic Development of Southern Africa* (Cape Town: Oxford University Press, 1962), chap. v, "The Diamond Story: World Crises and World Leadership," and H. L. van der Laan, *The Sierra Leone Diamonds* (London: Oxford University Press, 1965).

4. SLST, *Diamonds* (London: Newmen Neame, n.d.), p. 3, and Great Britain, Colonial Office, *An Economic Survey of the Colonial Territories* (London: H. M. Stationery Office, 1935), p. 146.

5. In 1954 the Diamond Supplementary Agreement Ratification Ordinance was passed, providing that SLST pay a Diamond Industry Profits Tax in addition to the income tax at the prevailing company rate, the Diamond Industry Profits Tax being allowed as a deduction in arriving at the income tax payable. An overall maximum income tax of 60 per cent of the company's profits was provided. The mineral rent was also raised to £10,000. All other companies pay taxes at lower rates.

Table 22), but production rapidly expanded during the early years to a wartime peak of 1,046,000 carats in 1942. The Sierra Leonean operations—as evaluated by H. T. Dickinson,[6] a consulting engineer to the DeBeers organization, and others—appeared to pose such an imminent threat to DeBeers that it was deemed essential to bring SLST into the cartel. Negotiations toward this end began almost immediately and were successfully completed for the year 1935. The agreement provided *inter alia* that the DeBeers organization would buy a minimum of £1,395,000 of diamonds from all outside producers, including Sierra Leone, and the DeBeers organization was granted the right to renew this agreement for one year.[7] Thus, SLST was guaranteed a minimum amount of gross sales for a two-year period, regardless of market conditions, and the possibility of full participation in an expanding market, should such come into being. Details of subsequent agreements are limited, but the available evidence indicates that the bargaining position of SLST vis-à-vis the DeBeers organization improved until 1942 as its diamond output expanded. For example, Gregory reports that CAST, the bargaining agent of SLST, refused the initial 1942 contract, and the agreement was concluded only after Sierra Leone was guaranteed 12 per cent of world diamond sales.[8] The minimum commitment included in all previous agreements was dropped; but under the bull market conditions during the war, the loss of this provision was inconsequential.

The expansion of diamond production by SLST from 1933 to 1942, which permitted the negotiation of the aforementioned agreement of 1942, was reversed almost immediately. In 1943 production fell to the levels of 1940 and 1941, and by 1945 output was less than half that of the record year of 1942. The decline

6. Dickinson stated in a letter to Ernest Oppenheimer: "In my view this field as a whole will produce more diamonds in value than Angola and the Congo combined. . . . I feel very anxious about the position and feel that some definite arrangement should be come to as early as possible with the SLST. . . . I feel rather depressed as these fields are a great menace to DeBeers and the Corporation, particularly in a moderate market" (Gregory, *Ernest Oppenheimer*, p. 308).

7. *Ibid.*, p. 309. Details of the percentage breakdown of the minimum commitment between the various outside producers are not available.

8. This agreement was to replace the existing 9–10–11 per cent contract. The exact meaning of these percentages is not known, but they may refer to the percentages of bort, industrial, and gem markets, respectively (*ibid.*, p. 326).

persisted into the fifties, reaching its nadir in 1954 when only 401,000 carats were mined. Consequently, SLST's share of the world market plummeted from an immediate postwar high of 4.6 per cent in 1947 to 1.7 per cent in 1952. In 1958 this downward trend was reversed, but experts are of the opinion that production will stabilize in the vicinity of the 600,000 carat level, which is below the production levels of the late thirties and early forties.[9]

Various hypotheses may be adduced to explain the output behavior of SLST, among them, that SLST was a high-cost producer in the diamond cartel and was thus allocated a smaller output quota, or that the mines were decapitalized because of unfavorable profit expectations.[10] The evidence, however, suggests that the most significant causal factor involves the depletion of the diamond deposits. If it is assumed that the amount of capital per worker has not fallen, that the skill of labor has not deteriorated, and that the "accessibility"[11] of diamonds is unchanged, then the average productivity of labor should be relatively constant over time. A decrease in the supply of either capital or accessibility while the supply of labor is held constant should, within the relevant range, reduce the average productivity of labor; and an increase in the supply of capital and/or accessibility under the same conditions should have the opposite effect. There is no evidence suggesting that the capital/labor ratio for SLST has diminished over time; indeed, the data suggest that it has increased. Moreover, there is no reason to believe the skill of the Sierra Leonean tribesmen employed by SLST has decreased over time. Thus, any trend in the productivity of labor should be largely attributable to variations in either the accessibility of diamonds or the supply of capital. It is apparent from Table 22 that the average productivity of labor fell almost continuously

9. See Sierra Leone, *Report of the Mines Department, 1961*, pp. 1–3, and 1962, pp. 4–5; and United States, Department of the Interior, Bureau of Mines, *Mineral Trade Notes*, LIX, No. 1 (July, 1964), 14.

10. The large capital outlays of SLST on new treatment plants and mines, excavation equipment, and training facilities would appear to refute this hypothesis (see SLST, *Diamonds*, p. 6). Similarly, the literature on the cartel's operations fails to corroborate the first hypothesis. There is no indication that the cartel has ever sought to limit the physical output of outside producers.

11. Accessibility will be treated in the remainder of this discussion as a separate factor of production.

Table 22. *Production, export, and employment statistics of SLST: 1932–64*

Year	Production (000 carats)	Exports (£ 000)	Percentage of world production	Average annual employment	Output per man-year
1932	1	64	n.a.	n.a.	n.a.
1933	32	64	n.a.	n.a.	n.a.
1934	69	137	n.a.	n.a.	n.a.
1935	295	402	n.a.	n.a.	n.a.
1936	616	500	n.a.	n.a.	n.a.
1937	913	1,085	n.a.	n.a.	n.a.
1938	690	858	23.3	n.a.	n.a.
1939	684	644	10.9	1,764	389.8
1940	885	781	12.7	1,614	548.6
1941	850	n.a.	n.a.	1,713	496.2
1942	1,046	n.a.	n.a.	1,909	548.0
1943	843	n.a.	n.a.	2,007	415.8
1944	609	n.a.	n.a.	2,177	279.6
1945	504	n.a.	n.a.	2,566	196.4
1946	559	513	1.7	2,716	205.9
1947	606	1,117	4.6	2,752	220.0
1948	466	923	2.4	2,620	177.8
1949	494	1,098	3.9	2,721	181.6
1950	655	1,556	3.1	2,795	234.5
1951	475	1,372	2.1	2,737	133.5
1952	453	1,217	1.7	2,730	165.8
1953	482	1,198	2.0	2,599	185.4
1954	401	1,700	2.1	2,477	161.7
1955	419	1,400	1.9	2,420	173.8
1956	427	1,831	2.3	2,538	168.6
1957	506	1,395	1.8	2,345	215.8
1958	648	2,415	3.7	2,828	229.1
1959	660	2,856	3.1	3,249	203.1
1960	685	4,358	5.0	3,520	194.6
1961	889	4,428	4.6	3,474	223.0
1962	603	— [a]	5.5[a]	3,855	156.0
1963	n.a.	9,424[a]	3.5[a]	n.a.	n.a.
1964	600	7,886	5.8	n.a.	n.a.

a. SLST withheld all exports in 1962. The 1963 figure includes approximately £5.3 million of 1962 production exported in first quarter of 1963.

Sources: Sierra Leone, *Report of the Mines Department*, 1932–63; Gregory, *Ernest Oppenheimer*, pp. 322, 366; *Sierra Leone Trade Journal*, 1964/65.

from 1942 to 1954 and that a moderate increase then ensued until the precipitous decline of 1962.[12] From the point of view of the hypothesis under consideration, it is significant that the major increase in the average productivity of labor was concurrent with the opening of a new mine and treatment plant at the Torma diamond field as well as other capital improvements at both Yengema and Torma.[13] It is suggested that the deviation from the observed downward trend in the average productivity of labor occurred because these expenditures offset the influence of the declining accessibility of diamonds. Another indication that the downward trend of the average productivity of labor is largely attributable to the depletion of the more accessible diamond fields comes from the reported diamond recovery rates. The rates are available for only 1961 and 1962, but even these limited data reflect the decline in the accessibility of diamonds. In 1961 the company removed 2,132 thousand cubic yards of overburden and processed 690,700 cubic yards of gravel to obtain 889,000 carats, giving a recovery rate of diamonds to processed gravel of 1.28 carats per ton.[14] Then in 1962 the diamond recovery rate fell to .81 carats per ton. Whether the recovery rates for the two years are significantly different cannot be determined from the available data; nevertheless, it does appear that in the future an increasing amount of gravel will have to be treated in order to obtain a given number of carats.

2. *The Alluvial Diamond Mining Scheme*

a. ***Enactment of the scheme.*** Before 1955 the only legal impairment of the monopolistic and monopsonistic position of SLST involved the government's 1945 decision to set wages in the mining industry through a Mining Wages Board. However, following

12. The precise reason for the 1962 decline is difficult to ascertain but is undoubtedly related to the dispute between SLST and the government which resulted in SLST's decision not to export diamonds for the duration of 1962. Employment and output statistics for 1963, when available, should confirm this observation.

13. Sierra Leone, *Report of the Mines Department, 1957*, p. 6. Capital expenditures have exceeded £300,000 in every year since 1956 with the exception of 1958 and 1960 (SLST, *Diamonds*, p. 6).

14. *Report of the Mines Department, 1962*, p. 1.

World War II the monopolistic position had been destroyed *de facto* as a result of illicit mining activities. These illicit mining activities posed a twofold problem: on the one hand, SLST had to employ an increasing number of armed guards in order to prevent encroachment on its diamond deposits; on the other hand, the government lost large amounts of custom revenues when the illegally mined diamonds were smuggled into neighboring countries.[15] In an attempt to eliminate these problems, an agreement was reached in 1955 between SLST and the government to abrogate the 1935 license. Under the terms of the new agreement, SLST surrendered the major part of the 1935 concession excepting only a 310-square-mile area where the reserves were already proved or developed.[16] The existing ninety-nine-year lease was reduced to fifteen years with renewal options for three extension periods of ten, five, and ten years, the last extension being subject to terms negotiated at the time of the extension. In return, SLST received £1,570,000 compensation plus the promise of the government to increase its security patrols on the borders of the new lease.

In the area ceded by SLST, the government established the Alluvial Diamond Mining Scheme which permits the minister of mines to declare any part of the former Protectorate, except areas already leased to a mining company, to be a licensed Alluvial Diamond Mining Area.[17] Once an area is declared a mining area, the inspector of mines may, on the recommendation of the local tribal authority and with the consent of the landholder and occupier of the area, grant a one-year alluvial Diamond Mining License to any native of Sierra Leone or any firm controlled by Sierra Leoneans. Each license is limited to an area 1,000 by 400

15. The magnitude of the illicit diamond activities can be partially ascertained by examining the visible balance of trade for Sierra Leone during the early fifties. In 1952 an adverse balance of trade of £142,000 occurred, followed by a favorable balance of £834,000 in 1953. During the next three years adverse balances of £1.5, £6.9, and £9.9 million were experienced as the result of the tripling of merchandise imports. No studies of Sierra Leoneans' marginal propensity to import have been made, but the rapid change in imports indicates it is quite "high." The size of the marginal propensity to import is largely determined by the lack of domestic manufacturing discussed in the next chapter.

16. *Report of the Mines Department, 1957,* pp. 3–6.

17. Alluvial Diamond Mining Ordinance and Rules, 1956, para. 3 (1). The following paragraph is based on this act.

feet (more than one license may be granted per person), but the license holder may not employ more than twenty laborers or tributors per license. The act also attempts to control the flow of diamonds mined under the above provisions through the establishment of Alluvial Diamond Dealers and Exporters Licenses which must be renewed each year. Holders of mining licenses may sell directly to either dealers or exporters, but not to holders of mining licenses. Dealers may sell to other dealers or exporters. While the new program has not entirely eliminated diamond smuggling, the Mines Department estimates the magnitude of the problem has been reduced to about £1–2 million per year since 1959 versus £10–15 million between 1954 and 1959.[18] As shown in Chapter VI, the reduced volume of smuggling has resulted in a substantial inflow of revenues to the government.

b. ***Production under the scheme.*** During the first year of the Alluvial Diamond Mining Scheme, the value of diamonds exported under the new program totaled £1,627,000, or 47.1 per cent of all diamond exports, and production rose rapidly to £2,125,000 in 1960, or 73.3 per cent of all diamond exports. Between 1960 and 1963, however, the value of exports produced under the scheme fell 42 per cent because of absolute declines in the number of carats exported and a reduction in the ratio of gem to industrial diamonds from 0.55 in 1960 to 0.23 in 1962 (see Table 23). Production and the value of alluvial exports rebounded in 1964, as the average price received per carat advanced sharply (see Table 22), but total production was still significantly below the levels attained in 1960 and 1961. Because of the large number of variables involved, it is difficult to ascertain whether the decline is the result of increased smuggling, the licensing policies of the government,[19] a decline in the accessibility of diamonds, or some combination of these factors. Undoubtedly, each of the three factors contributed to the decline, but one suspects that the decline in the accessibility of diamonds, which

18. Sierra Leone, *Report of the Mines Department, 1962*, pp. 4–5.

19. The area open for Alluvial Diamond Mining Licenses has not increased since 1961, and the government is attempting to limit the issuance of licenses on some basis of efficiency (Sierra Leone, *A Progress Report*, p. 35).

Table 23. *Production and employment statistics of the Alluvial Diamond Mining Scheme: 1956–64*

Year	Production (000 carats)	Exports (000 carats)	Value (£ 000)	Alluvial exports as a percentage of all diamond exports	Gem to industrial ratio	Alluvial mining licenses issued	Average number of tributors employed
1956	n.a.	125	1,627	47.1	n.a.	4,011	50,000–70,000
1957	n.a.	465	5,030	78.2	n.a.	6,042	50,000–70,000
1958	n.a.	800	4,769	66.3	n.a.	2,756	24,860
1959	631	553	3,953	58.1	n.a.	2,073	19,220
1960	1,224	1,308	12,125	73.3	0.55	2,267	24,360
1961	1,406	1,413	11,541	72.3	0.44	2,759	28,350
1962	n.a.	1,158	7,109	100.00	0.23	2,259	24,27
1963	n.a.	649	6,740	41.6	n.a.	n.a.	n.a.
1964	n.a.	1,050	13,984	63.8	n.a.	n.a.	n.a.

Sources: Sierra Leone, *Quarterly Statistical Bulletin,* No. 3 (Sept., 1964), p. 38, and various issues of the *Report of the Mines Department.*

has also affected SLST, combined with the primitive techniques employed, has played a leading role.[20]

The future of the scheme is difficult to ascertain, but it is doubtful whether production will ever again reach the levels obtained in 1960 and 1961. At the best, one must accept the pessimistic forecast of the Mines Department that "indications are that it [the scheme] still has several years of life."[21]

3. *The Government Diamond Office*

The abrogation of the SLST's monopolistic rights to mine diamonds did not affect the marketing agreements between SLST and the Diamond Corporation; but the creation of numerous small, individual producers meant that a significant proportion of future sales stood outside existing arrangements. The Diamond Corporation and the government were anxious to re-establish some form of the earlier monopsonistic position of the Diamond Corporation. Each, however, wanted the re-establishment for a different reason: the government wanted to prevent diamond smuggling and the corporation wanted to avoid the costs of enter-

20. *A Progress Report* states that alluvial "mining in general has continued to be on rather primitive lines. . . . There has been, however, a small improvement in mining methods [and] . . . machinery is now used by a few miners" (p. 35).

21. Sierra Leone, *Report of the Mines Department,* 1962, p. 5.

ing into and enforcing sales contracts with individual diggers and dealers. Accordingly, an agreement was obtained whereby the latter created a wholly owned subsidiary, the Diamond Corporation Sierra Leone Limited, which would purchase all diamonds mined by licensed alluvial miners until December 1, 1960.[22] The creation of an explicit marketing channel neither inhibited illicit mining and dealing activities nor gave the government sufficient control of the corporation's activities.[23] Therefore, on August 1, 1959, the original agreement was modified, and the Government Diamond Office (GDO), managed by the Diamond Corporation Limited, was created as the final buyer and sole exporter of diamonds produced under the Alluvial Diamond Mining Scheme.[24] The corporation agrees to purchase all diamonds tendered it by GDO in return for its monopsonistic buying position.[25] In addition, the corporation agrees to provide all of "the skilled staff required to sort and value diamonds, and to bear all other operating expenses, including the provision of the millions of pounds required each year to pay diggers and dealers at site. Government allows the Corporation a commission of one per cent on its purchases to help meet these expenses."[26] The prices paid to the diggers and dealers by GDO must be approved by the Executive Board, and any seller whose diamonds are valued at £5,000 or more may sell his lot at tender in London if he is unsatisfied with

22. *Annual Report of the Diamond Corporation for the Year Ending 31 December, 1955*, as quoted in Gregory, *Ernest Oppenheimer*, p. 372.

23. *Mining Journal* reports somewhat exaggeratedly that the situation in Sierra Leone at the beginning of 1959 had "reached such proportions as to imperil the whole economic structure and constitutional future of the country" (Jan. 30, 1959, p. 252).

24. In 1961 a politically oriented modification occurred which did not affect the structure of GDO. The government decided that it was politically expedient to drop a company chartered in South Africa as manager of its leading export. The Diamond Corporation Ltd. thus formed a wholly owned subsidiary, the Diamond Corporation of West Africa Ltd., registered in Great Britain, to manage GDO.

25. In 1962 the government legislated that all exports of SLST must be made through GDO. SLST therefore refrained from exporting diamonds until a compromise could be worked out. Under the terms of the compromise, all SLST production is sorted and valued by GDO, but SLST need sell only 50 per cent of the value of its output to the Diamond Corporation. The initial agreement between GDO and the Diamond Corporation was then modified to read that the corporation guarantees purchases "to the extent of holding in stock Sierra Leone diamonds up to a value of £3 million" (Government Diamond Office, *Annual Report for 1962*, Freetown: Government Diamond Office, 1963, p. 3).

26. "History and Function of the Government Diamond Office," *Sierra Leone Trade Journal*, IV (April–June, 1964), 49–50.

the price offered by GDO.[27] Should a seller use this option, GDO pays him in advance 75 per cent of their offered price. If the lot receives a higher bid in London, the seller receives the higher price; if not, he receives GDO's price minus the cost of tendering.

The apparent success of GDO in curtailing illicit activities stems not so much from GDO's overt operations but rather from the reduction in the diamond tax rate. Prior to August of 1959, a total levy of 7.5 per cent was made on all diamond exports which exceeded by at least 3.5 per cent the duties levied in the neighboring countries of Guinea and Liberia.[28] After August, 1959, the rate was reduced to 4 per cent and total revenue expanded as more diamonds were sold through the Government Diamond Office.[29] In April of 1961 the rate was increased to 5 per cent, which is again above the rates of the neighboring countries, but the volume of smuggling does not appear to have increased. Apparently, to those in legal possession of diamonds, the payoff of smuggling activities is insufficient for the risks involved. The curtailment of smuggling activities thus appears to have evolved from the elimination of price differentials existing in neighboring countries.

B. Iron Ore

The Marampa iron deposits were discovered in 1926, and a concession to work the deposits was granted in November, 1927, to the African and Eastern Trade Company by the local Tribal Authorities. The company planned originally to develop the concessions through its own financial resources, but two events made the company decide that "the development could not be undertaken profitably without some assistance from the Govern-

27. In 1962 only three parcels valued at £44,000 were so tendered and one of these did not reach the price offered by GDO. Tendered shipments in 1959, 1960, and 1961 were £28,000, £23,000, and £50,000, respectively (GDO, *Annual Report for 1962*, p. 8).

28. GDO, *Annual Report for 1962*, pp. 5–6.

29. *Ibid.* Table 23 gives some indication of the jump in official exports from the Alluvial Diamond Mining Scheme following the above measures. Exports in 1960 exceeded exports in 1958 and 1950 by 500,000 and 750,000 carats, respectively, and revenues increased from £302,000 in 1958 to £433,000 in 1960.

ment":[30] (1) construction costs for the fifty-two-mile railway and ancillary services necessary for the exportation of ore were revised from £600,000 to £1,000,000 and (2) the Colonial Development and Welfare Fund, enacted in 1929, permitted the grant of loans to colonial governments "for the purpose of promoting the development of mineral resources."[31]

The government of Sierra Leone had never before directly assisted commercial ventures, and the governor wrote on October 1, 1929, "On principle I am opposed to a Colonial Government becoming involved in supplying capital to commercial ventures. . . ."[32] But the anxiety of being left out of the "spoils" quickly altered his opinion. On November 16, 1929, he stated in a letter to the secretary of state, "What I fear is that the applications for help from the Fund will be received in increasing numbers from other colonies and that if Sierra Leone rejects the assistance now recommended that available money may be devoted to projects elsewhere and our opportunity lost."[33]

Accordingly, an agreement was reached on March 5, 1930, and Sierra Leone loaned the company £500,000 for twenty years at 5.5 per cent interest. The accumulation of interest and repayment of the principal was deferred for five years or six months from the first shipment of ore, whichever was shorter.[34]

Since 1935 the physical production of iron ore by the Sierra Leone Development Company (Delco)[35] has risen at an average annual rate of 5.3 per cent, and iron ore is now the second largest export of Sierra Leone by value.[36] During the period 1952–56, when iron ore prices rose from £1.3 to £3.9 per ton, iron ore exports comprised as much as 73.5 per cent of the value of all

30. Sierra Leone, *Papers Dealing with the Colonial Development Fund,* Sessional Paper No. 3 of 1930 (Freetown: Government Printer, 1930), p. 1.

31. *Ibid.* An especially attractive feature of this act was that the whole or a part of the interest on such loans could be waived during the initial period of development if deemed necessary.

32. *Ibid.,* p. 6.

33. *Ibid.,* p. 9.

34. Repayment began in 1933 and ended in 1938 (Sierra Leone, *Report of the Mines Department,* 1939, p. 3).

35. A wholly owned subsidiary of the African and Eastern Trade Company.

36. See Table 24. If only the period 1947–63 is used, the rate of growth is 5 per cent. Delco expects production to reach 3 million tons per year by 1966 (*Annual Report of the Sierra Leone Development Company, 1963,* Freetown: Sierra Leone Development Co., 1964, p. 2).

Table 24. *Production, employment, and wage rates for the iron ore industry: 1935–62*

Year	Production (000 tons)	Average employment	Output per man	Statutory wage for light work	Rate per day[a] for heavy work
1935	433.5	n.a.	n.a.	—[b]	—[b]
1945	827.3	2,935	281.9	—[b]	—[b]
1946	n.a.	2,801	n.a.	1s. 6d.	2s.
1947	840.6	2,542	330.7	1s. 6d.	2s.
1948	952.6	2,271	419.7	1s. 6d.	2s.
1949	1,089.0	2,460	442.7	1s. 8d.	2s. 2d.
1950	116.0	2,693	432.9	1s. 8d.	1s. 8d.
1951	1,140.3	2,792	408.4	2s. 9d.	3s. 2d.
1952	1,152.5	3,238	355.9	2s. 9d.	2s. 9d.
1953	n.a.	3,178	n.a.	3s. 7d.	4s.
1954	n.a.	2,168	n.a.	3s. 7d.	4s.
1955	1,311.6	2,183	609.9	4s. 2d.	4s. 7d.
1956	1,311.1	2,509	522.5	4s. 7d.[c]	5s.[c]
1957	1,324.0	2,801	472.7	5s. 1d.	5s. 6d.
1958	1,299.9	3,414	308.8	5s. 7d.[d]	6s.[d]
1959	1,426.3	3,361	424.3	5s. 7d.	6s.
1960	1,446.3	2,629	557.6	5s. 7d.	6s.
1961	1,668.3	2,510	664.5	5s. 7d.	6s.
1962	1,843.6	2,613	705.3	6s. 3d.	6s. 8d.

a. Excepting specifically skilled people for whom the Mining Wages Board sets separate rates.
b. Statutory wage rate not imposed.
c. Effective December 8, 1955.
d. Effective December 28, 1957.
Sources: Sierra Leone, *Report of the Mines Department*, 1935–62, and Public Notices for various years.

mineral exports and approximately 25 per cent of the value of all exports. The value of iron ore exports has quadrupled since 1950.

The increase in physical output by Delco has been accomplished without an absolute increase in employment. Employment statistics (Table 24) show that Delco's labor force ranged from a low of 2,168 in 1954 to a high of 3,414 in 1958 but that total employment for the years 1947 and 1962 was virtually unchanged. If one assumes that the quality of labor remained relatively constant during this period, then the increase in the productivity of labor from 281.9 tons per man-year in 1945 to 705.3 in 1962 was attributable to technological changes and/or an augmented supply of capital. The fact that productivity increases derive from technological changes and/or the greater usage of

capital is not particularly significant, but the following question arises. Why did Delco adopt labor-saving rather than labor-using techniques, especially in light of the fact that it once employed the very labor-intensive technique of head-loading its freight cars? Since estimates of the capital stock of Delco and the price of capital purchased are not available, a precise answer to the question cannot be given, but this section maintains that the wage policies of the Mining Wages Board should not be omitted from the answer.

Following the enactment of the Wages Board Ordinance of 1945,[37] the Mining Wages Board was established after the governor in council was satisfied that "the conditions of employment and other circumstances of workers engaged at a daily rate of pay in mining undertakings . . . are such as to render expedient the application of this Ordinance [Wages Board Ordinance]."[38]

The board immediately established a minimum wage rate of 1*s.* 6*d.* per day for all miners engaged in light work and 2*s.* for all others except highly skilled personnel. During the next seventeen years, the board reviewed and revised the minimum wage rates nine times, so that by 1962 wage rates were 6*s.* 3*d.* and 6*s.* 8*d.* for "light" and "heavy" work, respectively. These increases amount to an average annual rate of growth of 9.6 per cent for the wages of light labor and 7.9 per cent for heavy labor vis-à-vis a growth rate of 4.9 per cent for the average productivity of labor during the same period. The apparent result of the Wages Board policy is that the amount of labor employed by Delco is less than would have been the case had the wage rates been set without government intervention. While this conclusion is valid if and only if the supply curve of labor facing Delco is positively sloped, the ability of Delco to expand employment during the Korean War period and the period from 1955 to 1958 indicates that the long-run if not the short-run supply curve of labor is positively sloped. In other

37. Para. 14 (1) of this ordinance states that "any Wages Board shall have power to fix the minimum rate of wages to be paid, either generally or for any particular work, by their employers to all or any of the workers in relation to whom the Board operates. . . . (2) The power to fix a minimum rate of wages shall include the power to fix holidays with pay. . . . (3) The Board can decide the normal work week and has the power to fix overtime rates of wages."

38. Public Notice 16 of 1946.

words, the argument states that since World War II, technological changes and capital investment by Delco have shifted the average and marginal productivity curves and the value of the marginal product curve of labor to the right, the short-run equilibrium quantity of labor employed being determined when the minimum wage was set by the Wages Board. Since it is believed that the long-run supply curve of labor is positively sloped, the actions of the Wages Board have tended to restrict the use of labor and may even have induced the adoption of more labor-saving techniques than would otherwise have been employed. The policy implications are obvious if the goal of the society is the full employment of the available and potential labor force.

C. Other Mining Activities

The combined value of all other mineral exports has not exceeded 10 per cent of the total value of all mineral exports since the late thirties.[39] At various times, gold, platinum, chrome ore, and columbite have been exported by firms possessing monopoly mining licenses, but none of the minerals listed above were mined in 1964.[40] The most promising surrogates for these mining activities involve the production of rutile and bauxite.

The Sierra Leone Ore and Metal Company, owned primarily by Swiss interests, possesses exclusive mining and prospecting rights for bauxite in the Port Loko, Moyamba, and Pujehun districts. Production began in 1963, and 20,000 tons valued at £32,000 were exported.[41] In 1964, 155,000 tons valued at £170,000 were exported, and it is believed that production will eventually exceed 200,000 tons per annum.

In 1964, officials of Sherbro Minerals Limited, a corporation jointly owned by Pittsburgh Plate Glass Company and British

39. See Table 21 and Sierre Leone, *Report of the Mines Department,* for earlier years.

40. The most important of these exports during the fifties and early sixties was chrome ore. From 1950 to 1963, an estimated 203,000 tons were produced and exported, earning approximately £2,109,000. The mine was closed at the end of 1963 and is not expected to reopen.

41. Sierra Leone, *A Progress Report,* p. 37.

Titan Products Limited, announced that proven reserves of 30 million tons of rutile had been discovered in southwestern Sierra Leone and that production would begin in 1966 at the rate of 100,000 tons per year.[42] Since the United States is the world's major user of rutile and the F.O.B. Atlantic seaboard price of this mineral has fluctuated in the vicinity of $100 per ton since 1962, the production of rutile may contribute as much as £3.5 million to the export proceeds of Sierra Leone. This amount, however, will probably not be obtained, as the addition of another 100,000 tons of rutile to the current world production of 200,000 tons will tend to depress the price. The amount of the price decrease will depend on the elasticities of supply and demand for rutile; but in any case, rutile appears to be the most important new source of foreign exchange for Sierra Leone.

D. Summary

The rapid growth of diamond and iron ore production and the absolute decline of agricultural production since the early fifties have reordered the export sector of the Sierra Leone economy, with mineral exports in 1963 accounting for 83.7 per cent of total exports versus 30.4 per cent in 1951. A reordering has also occurred within the mining sector itself as the value of diamond exports has increased more rapidly than the value of iron ore exports. As a result, diamond exports comprised 75.9 per cent of all mineral exports in 1963 versus 52.8 per cent in 1950. The rapid growth of diamond exports followed the abrogation of SLST's monopoly right to mine diamonds in 1956. Under the scheme established by the Alluvial Diamond Mining Ordinance and Rules of 1956, native diggers are permitted to mine diamonds under license from the government. This scheme, plus the subsequent export tax reduction on diamonds and the formation of the Government Diamond Office, has reduced the diamond smuggling which plagued Sierra Leone during the fifties. The com-

42. "Rutile for Sierra Leone," *Sierra Leone Trade Journal*, IV (Oct.-Dec., 1964), 125. The Sierra Leonean reserves exceed the previously proven world reserves.

bined output of the native diggers and SLST peaked in the early sixties, but experts are of the opinion that this level of output will not be attained again unless significant new diamond deposits are found. Consequently, if the price received per carat ceases to rise in the future, the total and relative export proceeds of diamonds may be expected to fall. The corresponding loss of foreign exchange may be fully offset by increased production of iron ore, rutile, and bauxite, but it is somewhat doubtful whether the rate of growth of mineral proceeds from 1956 to 1962 can be matched in the near future. Thus, in the absence of new mineral discoveries, the future growth of export proceeds will have to come from outside the mining sector.

• 5 •

The Industrial Sector

The insufficiency of consistent, long-term data relating to value added and investment by various firms of the industrial sector prohibits detailed examination of the growth of industry in Sierra Leone. The growth that has occurred can only be roughly approximated through the use of aggregate employment statistics and the emergence of new firms and activities within that sector. Such a procedure is obviously unreliable, since technological advances and/or demand shifts might cause various indicators of production to move in opposite directions from employment changes, or the magnitudes of the changes might be quite different. The scarcity of relevant data, however, precludes alternative methods of ascertaining industrial development.

A. Industrial Employment

Since 1956, when labor returns in their present form were first made available, a steady growth in manufacturing employment by all firms (including government) employing six or more workers has occurred. In 1956, manufacturing employment stood at 2,321 (see Table 5), or 5.7 per cent of the enumerated labor force; but during the next eight years, manufacturing employment nearly doubled as it increased to 4,431. Nevertheless, the percentage of the total enumerated labor force employed in the manufacturing sector rose to only 7.7 per cent. It is thus apparent that the significance of the industrial sector in terms of both absolute and relative employment has been limited in the past; the percentage

Table 25. *Number of people employed at end of December, 1963, by manufacturing category*

Manufacturing category	*Number employed*
Grain and mill products	400
Bakery products	49
Distilling and blending of spirits	60
Brewing and malt-making	155
Soft drinks and carbonated water	244
Tobacco	360
Sawmills	821
Furniture and fixtures	73
Printing	476
Chemicals	58
Vegetable and mineral oils and fats	659
Structural clay products	31
Motor vehicle repair	1,086
Total manufacturing employment	4,452

Source: Sierra Leone, *Quarterly Statistical Bulletin*, No. 3 (Sept., 1964), p. 58.

of GDP derived from the industrial sector is unknown but would appear to be less than 10 per cent.[1]

Changes in the structure of the manufacturing sector cannot be directly ascertained because detailed breakdowns of categories within this sector are not available over time. At present the only structural breakdown available is for the year 1963, which is presented in Table 25. The table reveals that nearly a quarter of the employees listed in the manufacturing sector are engaged in the repair of motor vehicles. This category is associated with the industrial sector because of the limited manufacture of parts and the construction of vehicle bodies by the Road Department and the Railway Repair Shop, even though the majority of the activities within this category are directed toward the servicing and repairing of motor vehicles. Separation of employment by type of employer, i.e., governmental versus private enterprise, is not possible because of the reporting procedures of the Labour Department; but it seems likely that the government employs more than

1. The 10 per cent figure cannot be substantiated from published data, but two factors lend credence to it: (1) the paucity of manufacturing throughout the history of Sierra Leone and (2) estimates that the potential output of all "development firms" (a term explained in Section B of this chapter) is only £7.5 million. Based on an estimated GDP of £100 million, actual current industrial output appears to be less than 10 per cent.

50 per cent of all the workers in the manufacturing sector, since governmental employment predominates in each of the following categories: repair of motor vehicles, manufacture of grain and mill products, sawmilling, furniture and fixtures, printing, and the manufacture of vegetable and mineral oils and fats.[2] With the exception of the manufacture of chemicals, private industry in Sierra Leone produces primarily consumer goods as opposed to producer goods, if such a distinction is meaningful.

B. The Role of the Government

The expansion of the industrial sector that has occurred since 1960 has paralleled the promotional activities of the Sierra Leonean government. Indeed, the government, in an attempt to emphasize its creative role in the manufacturing sector, now claims that "prior to Independence there were no industrial manufacturing activities in Sierra Leone, and the entire needs of the country were met by importation."[3] The political overtones of this statement are obvious, but the statement does not overly distort the pre-Independence, industrial "complex." Neither D. T. Jack's 1957 report nor *An Economic Survey of Sierra Leone* made in 1949 were able to report industrial undertakings other than soap manufacturing, the bottling of mineral water, furniture making, printing, milling of rice by the government, or the extraction of palm oil by SLPMB mills.[4] Since 1960, the government has taken active measures to promote industrial expansion through: (1) issuance of a non-nationalization policy statement, (2) the enactment of the Development Act, (3) the establishment of an indus-

2. Transportation Consultants, Inc., reports that the Mechanical Branch of the railway alone employed 956 workers in April, 1962 (*Transportation Survey*, p. 79). Every large rice mill and palm oil processing factory is owned by the government. The value of the output of timber and furniture by the government is approximately £600,000 vs. £200,000 by private interests (Sierra Leone, *A Progress Report*, pp. 62–63), and the government printer does all governmental work plus a substantial percentage of the semipublic work.

3. Sierra Leone, *A Progress Report*, p. 53. Hugo Godbeer, co-ordinator of industrial development, Ministry of Trade and Industry, reiterated this position in a personal interview with the author in February, 1965.

4. Sierra Leone, *An Economic Survey of Sierra Leone, 1949* (Freetown: Government Printer, 1951), p. 17, and Jack, *An Economic Survey*, p. 58.

trial estate, (4) increased governmental participation in industrial undertakings, and (5) the creation of Sierra Leone Investments Limited. Each of these measures will be discussed below.

1. *Nationalization Policy*

The initial step taken in the program to provide incentives for foreign investors involved the issuance of a policy statement by the government concerning the nationalization of foreign enterprises. The prime minister, Sir Milton Margai, declared in 1960 that

> the Government wishes to make it clear that it has no intension, either now or in the future, of nationalising any form of commercial mining or industrial undertaking. If, however, new and unforeseen circumstances should lead to any change in this policy, Government hereby acknowledges its obligation to pay fair compensation in every case of nationalisation, and in the event of disagreement between itself and the parties concerned on what constitutes reasonable compensation in a given case, hereby states its willingness to refer the matter to arbitration by some mutually agreed international body. . . .[5]

2. *The Development Ordinance, 1960*

In 1960, the Sierra Leonean government promulgated a tax incentive ordinance, similar in many respects to the legislation of other African, Asian, and Latin American countries,[6] in an attempt to encourage foreign and domestic investment in the type of activity which is "not being conducted in Sierra Leone on a sufficient scale or at all or that is otherwise expedient in the public interest so to do."[7]

The ordinance provides that any company or person intending

5. Sierra Leone, Ministry of Information and Broadcasting, *Investment Opportunities in Sierra Leone* (London: Brown, Knight & Truscott, 1963), p. 7.

6. See the summary of the tax incentives provided by fifty-five developing countries in the International Chamber of Commerce, *Taxation and the Developing Nation* (Paris, 1959), and Stanford G. Ross, "Foreign Governments' Tax Incentives for Investment," *Proceedings of the 1959 Institute on Private Investments Abroad* (Albany, N.Y.: Matthew Bender, 1959), pp. 285–336.

7. Development Ordinance, 1960, para. 3(3).

to construct a new factory or extend an existing one may apply to the minister of trade and industry for a development certificate. The applicant must provide the following information: capacity of the factory, location of the factory, a proposed construction day for the factory, and an estimated production day. If the minister is satisfied with the merits of the company's proposal, he may issue a development certificate which may include any or all of the following provisions:

1. "Every development company during the tax holiday period shall be entitled, upon the issue to them of a development certificate, and subject to the terms and conditions as may be imposed by such a certificate, to import into Sierra Leone free of customs duty, or to purchase in Sierra Leone subject to refund of customs duty . . . such articles as may be specified in the certificate" for the purpose of constructing or extending plant, mine, or ancillary buildings and equipment.[8]
2. "The Minister may direct that the customs duty on raw or semi-processed materials required in the manufacture of articles in respect of which a development certificate has been issued, may be reduced by a specified amount or waived altogether, when imported by a development company."[9]
3. A development company is exempted from income tax during the tax holiday granted it by the minister of trade and industry in relation to all income arising from the development enterprise. However, in order to be eligible for this tax-free treatment, all net profits must be paid into a special reserve account which must be held in cash or invested in assets fully employed in the operations of the development enterprise. Should dividends be paid out during the period of the tax holiday they must bear company income tax and recipients must list them in their reported incomes. During the five years immediately following the tax holiday, dividends are not subject to company taxes but are taxable as personal income; but profits undistributed after the tax holi-

8. *Ibid.*, para. 7(1).
9. *Ibid.*, para. 10(1). This provision appears to be without time limit.

day has been over for five years are not subject to either tax.[10]

4. Capital allowances need not be taken during the period of the tax holiday and may be deducted from income arising from the development enterprise in the year or years immediately following the tax holiday.[11]
5. "Any loss incurred in a development enterprise during the tax period taken as a whole shall be available for off set without limit of time against the income arising from the development enterprise during the year or years of assessment immediately following the tax holiday period."[12]

The enactment of the Development Ordinance rests upon the hypothesis that reduction of corporate taxation will influence the behavior of investors. This hypothesis depends upon three basic assumptions about Sierra Leone or any underdeveloped country: (1) The level of taxation operates as a detriment or stimulus to investment decisions through its influence on the expected rate of return. (2) Tax incentives publicize the desire of the government for foreign investment and thus indicate a favorable attitude toward such investment. (3) Tax incentives are provided in most underdeveloped countries, and potential investments may be lost if the country is not "competitive" in terms of advantages offered investors.

The difficulty involved in planning or evaluating tax-incentive legislation derives from the fact that the functional relationship (or relationships) between taxes and investment is largely unknown.[13] Investment decisions involve complex evaluations of

10. *Ibid.*, paras. 11(1) and 13.

11. *Ibid.*, para. 11(2). The inclusion of this provision which permits rapid write-off of long-term capital investment negates the arguments of J. R. Hicks and Ursula K. Hicks that a tax holiday is nullified by the allowance of accelerated depreciation. This provision in effect extends the effective period of the *de jure* tax holiday (*Report on Finance and Taxation in Jamaica*, Kingston, Jamaica: Government Printer, 1950, para. 170). Alan Smith has noted that one disadvantage of this type of provision is that it may lead to uneconomic retention of old capital equipment in order to gain the tax advantage ("Tax Relief for New Industries in Ghana," *National Tax Journal*, XI, Dec., 1958, 365).

12. Development Ordinance, 1960, para. 11(3).

13. A recent work by Jack Heller and Kenneth M. Kauffman, *Tax Incentives for Industry in Less Developed Countries* (Cambridge, Mass.: Law School of Harvard University, 1963), explores changes in the present value of an enterprise under

multifarious variables, such as: the political, social, and economic stability of the country; availability of skilled manpower; and the extensiveness and efficiency of transportation facilities, to name only a few relevant variables. The influence of tax considerations on investment decisions is indeterminate in such a complex decision process, and the economic effects of tax considerations may be vitiated without simultaneous provision of an adequate overall investment climate.[14]

The task of evaluating tax concessions in Sierra Leone is rendered even more difficult when the monopolistic effects of development certificates in Sierra Leone are considered. The government has pursued the policy of granting only one certificate per product,[15] so that the monopolistic returns from investing in Sierra Leone may far outweigh the returns from any tax concession. The returns from this state-granted monopoly position are somewhat reduced, however, as the development company must agree not to raise the price of its product without prior consultation with the government during the period of the certificate; but in return for this concession the government also agrees to insulate the company from external competitors through the imposition of import quotas or tariff increases.[16] With these diverse investment consid-

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conditions of constant levels of profits over time and varying levels of corporate income taxes, exemption periods, and investment horizons. Their general conclusion is that if the investment horizon is less than infinite, then (1) the percentage increase in the present value of an enterprise decreases for a specific exemption period (and discount rate) as the length of the investment horizon increases, and (2) for a given investment horizon and tax holiday the percentage increase of the present value varies directly with the discount rate. If these factors were the only ones entering an investment decision, it seems probable that a tax holiday might drastically alter the investment patterns of a country. However, despite the beneficial aspects of tax holiday, Heller and Kauffman conclude that historical experience reveals only marginal changes in investment patterns following tax holidays. Apparently "other factors" are of equal or more importance in entrepreneurs' evaluation of profitability.

14. E. Barlow and I. Wender conclude from their studies that taxation neither impedes nor promotes foreign investment (*Foreign Investment and Taxation*, Englewood Cliffs, N.J.: Prentice-Hall, 1955, p. 124).

15. The author conversed with an Indian, currently manufacturing shoes in Ghana, who was refused a development certificate on the grounds that such a certificate had already been granted.

16. This paragraph is based on an interview with Hugo Godbeer of the Ministry of Trade and Industry, February, 1965. Mr. Godbeer related that in one specific instance, a development certificate was issued for the manufacture of plastic shoes. When the development company refused to buy its raw materials from a major producer of plastic and plastic shoes, the foreign firm retaliated by cutting its price per dozen of shoes from forty-one to twenty-one shillings. Investigations were

erations in mind, attention is now turned to the use of the Development Ordinance during the time interval 1960–65.

Since the inception of the Development Ordinance, eighteen firms have begun operation in Sierra Leone under the terms of a development certificate, and fifteen other certificates are currently under consideration. Table 26 presents the information available concerning these firms; employment, investment, and actual value of output data for a given period of time are not available. Using the capacity figures of Table 26, the potential value of output from these firms is in excess of Le 15 million ($21 million) or Le 6.8 per capita. Since not all the firms are currently producing and at least two were producing before 1960, the annual increment to the potential value of per capita income from these firms is substantially less than Le 6.8. The word potential, however, must be interpreted with caution, as the enterprises withdraw resources from existing uses, thereby lowering their overall contribution to GDP.

Table 26 reveals that foreign capital and entrepreneurs are participating in every developmental project, whereas private Sierra Leoneans are participating in only three of the projects. This observation raises the question whether a development ordinance in a country such as Sierra Leone can substantially augment domestic capital formation, and one needs to know whether even these limited investments would have occurred without the tax reduction.[17] The Sierra Leonean government has adopted the policy of actively participating in development enterprises (eight of the eighteen projects) and plans to sell its interests to the Sierra Leonean public after the firms have become well established. Whether this policy will actually be applied is uncertain, but it does reflect the government's attitude toward potential domestic investment resulting from the tax holiday.

A question even more important than the one raised in the preceding paragraph is whether foreign investors are attracted to

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made by the Import Evaluation Committee, and the committee deemed the price reduction unwarranted. The import license of the foreign firm was rescinded.

17. See the comments of Heller and Kauffman in relation to domestic investment in Puerto Rico, Mexico, and the Philippines under their tax programs (*Tax Incentives for Industry in Less Developed Countries*, p. 127).

Table 26. ***Formation of companies under the Development Ordinance, 1960***[a]

Companies	Products	Annual capacity: Quantity	Annual capacity: Value (Le)	Tax holiday (years)
Aureol Tobacco Co. (British)	Cigarettes, smoking tobacco, shag	8,000,000 cigarettes	5,400,000	6
Sierra Leone Oxygen Factory Ltd. (Italian)	Oxygen, carbon dioxide, acetylene	Oxygen 2,592,000 kg.	102,680	4⅓
		Carbon dioxide 17,000 kg.	38,000	
		Acetylene 864,000 kg.	128,000	
Sierra Leone Paint Manufacturing Co. (Lebanese)	Paint	800 tons	n.a.	6
Van Camp Sierra Leone Ltd. (American)	Frozen and canned tuna	2,500 tons	n.a.	5
Sierra Leone Brewery Ltd. (British/Dutch)	Beer, stout	700,000 gal.	1,400,000	5
Sierra Leone Airways (S.L. govt./British)	Passenger and freight transportation	n.a.	n.a.	n.a.
Sierra Leone Tomato Co. (Italian/S.L. govt.)	Tomato paste and puree	125,000 cartons	380,000	4
Wellington Distilleries (British/70 per cent S.L. govt.)	Spirits	100,000 gal.	1,200,000	5⅔
Plastics Mfg. (Bata/Lebanese/S.L. govt.)	Plastics, shoes	1,000,000 pairs	500,000	3
West African Umbrella Ltd. (Indian)	Umbrellas	25,000 doz.	400,000	3
Freetown Cement (Israeli/S.L. govt.)	Cement	55,000 tons	605,000	5
West African Shoe & Rubber Industries Ltd. (Swedish/S.L. govt.)	Footwear (other than plastic)	725,000 pairs	667,500	5
		50,000 sq. yd.	500,000	
Sierra Leone Mfg. Co. (Lebanese/Sierra Leonean)	Nails, screws, bolts	1,000 tons	800,000	3
Metropolitan Ltd. (Indian/Sierra Leonean)	Wearing apparel	50,000 doz.	300,000	3
Sierra Leone Tyres Ltd. (British/S.L. govt.)	Retreads	3,500 retreads	100,000	4
Sea Products Ltd. (Danish/Sierra Leonean)	Frozen fish	1,000 tons (storage capacity)	n.a.	5
Sierra Leone Knitting Mills (Kenyan/Sierra Leonean)	Knitted fabrics	120,000 doz.	720,000	5
Sierra Leone Diamonds (American/Sierra Leonean)	Cut and polished diamonds	20,000 carats	2,000,000	n.a.

a. Other products under consideration for a development certificate are candles, matches, margarine, soap, fertilizers, aluminum utensils, enamelware, reconstructed milk, textiles, and sugar.

Sources: Sierra Leone, *A Progress Report*, pp. 62–63, and the Ministry of Trade and Industry.

a country primarily as a result of its tax policy. In a world where tax concessions are no longer unique, the attraction of any one country's concession is minimal. Heller and Kauffman conclude that tax concessions

> are now so commonplace that one may assume that their function as advertisements of a favorable investment climate is inconsequential. Moreover, when compared to direct publicity and promotional efforts, tax incentives are an inefficient and costly method of advertising. Unlike direct advertising or promotional efforts, tax incentives come to the attention of a potential foreign investor only fortuitously, usually after he has begun making inquiries as to the desirability of investment in the particular country. For example, it was the author's impression that in Mexico many foreign investors had already made the basic decision to invest before learning of the tax incentives to which they would be entitled.[18]

The relevance of the above observations for Sierra Leone is apparent when it is noted that two of the firms receiving development certificates, Aureol Tobacco Company and Sierra Leone Oxygen Limited, had actually begun operations prior to the enactment of the development ordinance;[19] Van Camp had begun construction of its processing plant before it made application for a certificate;[20] and the Sierra Leone Paint Manufacturing Company, the Sierra Leone Brewery Limited, and the Sierra Leone Airways are known to have begun investigating investment prospects before the enactment of the bill.[21] All of the other firms receiving development certificates are producing goods consumed almost exclusively in Sierra Leone, which suggests that their establishment is related to the growth of the domestic market as well as to the tax concessions.

The investment decision, then, is a complex phenomenon related to many variables other than taxation. Since the majority of

18. *Ibid.*, p. 65.

19. In each case the certificate was made retroactive to the first production date, i.e., July 1, 1959, for Aureol Tobacco, and January 1, 1960, for Sierra Leone Oxygen Factory, Ltd.

20. Construction began January 1, 1961, and application for a certificate was made March 19. Van Camp was attracted to the West Coast of Africa by the discovery of tuna in the offshore waters. Its decision to locate in Sierra Leone was motivated primarily by the close proximity of Sierra Leone to the fishing grounds.

21. Hugo Godbeer, interview February, 1965. The observations above do not rule out the possibility that the firms anticipated passage of the act.

underdeveloped countries possess tax concessions, it is unlikely that the concessions of any one country will attract any one firm or substantially raise investment levels. The behavior pattern of a potential investor will normally be other than it would have been in the absence of the tax reduction only where a tax concession makes an unfavorable investment prospect a profitable one. However, once a company is established in a country, the tax concessions might induce it to seek out new activities. Van Camp would appear to illustrate this principle, since it is currently seeking a development certificate for the reconstitution of milk.

3. *The Industrial Estate*

As a further inducement to investors, the government has created an industrial estate near Freetown equipped with water, electricity, transportation services, banking facilities, and so forth. The plots are rented from the government for the nominal charge of £15 per acre per annum. Thc creation of such an estate derived partly from the enactment of a 1962 law which prohibits non-citizens from acquiring any freehold land in the Western Area by purchase, gift, or exchange, while still allowing a firm to lease such land. Eight of the development companies have located in the industrial estate.

4. *Industrial Loan Schemes*

The government has established two separate loan schemes in an effort to attract additional investment. The first scheme, the Development of Industries Board, was created in 1949 to serve the credit needs of wholly owned African enterprises. The board makes independent investigations of potential commercial and industrial undertakings and attempts to encourage investment in these areas.[22] The scheme has been administered on a very limited scale, only £90,000 being loaned during its first fifteen years of

22. For a detailed historical account of the workings of the board see J. H. Davies, "Manufacturing Industry in Sierra Leone," *Conference Proceedings of the 1962 Annual Meeting of the Nigerian Institute for Social and Economic Research* (Ibadan, Nigeria, 1963), pp. 142–151.

operation, and its results have been disappointing.[23] The board has been forced to reconstitute its activities on two different occasions as the result of borrowers' failure to repay advances (arrears amounted to £32,000 on £59,000 due by 1963).[24] The board is now permitted to make loans amounting to £20,000 per year, but the expected results of such a low level of operation are minimal.

In an attempt to foster the growth of larger and more diversified firms in Sierra Leone, the government and the Commonwealth Development Corporation (CDC) established Sierra Leone Investments Limited (SIL) in 1961. This corporation, created "to assist the economic development of the territory by investigating, initiating, and supporting commercial schemes in industry and agriculture,"[25] lent only to companies (both foreign and domestic) with a minimum investment of £10,000 and with the majority of the equity provided by the enterprise. By the end of 1963, the majority of SIL's £105,000 paid in capital was committed for the following projects: a flour mill, a tire-retreading factory, a plastics firm, and a palm kernel processing mill. No new commitments were made in either 1964 or 1965, however, as "the Company . . . experienced difficulty in finding projects to support. . . ."[26] During 1965, CDC and the government reviewed SIL's future and decided that "prospects of future business did not justify the maintenance of a resident manager, and accordingly CDC, in agreement with Sierra Leone Government, terminated its managing agency of the company on 31.12.65 and withdrew the manager."[27] This decision was due in part to recurring losses (£10,169 in 1963, £9,541 in 1964, and £8,821 in 1965), but was prompted primarily by the lack of demand for invest-

23. Sierra Leone, House of Representatives, *Parliamentary Debates*, Vol. II, Questions 146. The average size of loan advanced during the lifetime of the board has been £700 (Sierra Leone, Ministry of Information and Broadcasting, *Investment Opportunities in Sierra Leone*, p. 12).

24. House of Representatives, *Parliamentary Debates*, Vol. II, Questions 146.

25. Great Britain, Commonwealth Development Corporation, *Annual Report and Statement of Accounts for the Year Ended 31 December 1962* (London: Commonwealth Development Corp., 1963), p. 117.

26. CDC, *Annual Report and Statement of Accounts for the Year Ended 31 December 1964*, p. 120.

27. CDC, *Annual Report and Statement of Accounts for the Year Ended 31 December 1965*, p. 113.

ment funds noted in previous chapters. In other words, the demand for investment funds is a more relevant constraint on the industrialization of Sierra Leone than the supply of funds. Apparently, both domestic and foreign enterpreneurs consider investment in Sierra Leone unprofitable relative to all other investment opportunities.

In summary, the public or semiprivate sector engages the services of the majority of the employees of the manufacturing sector. Total employment is small when compared with other sectors, and the range of goods produced is limited. The government is actively seeking additional investment through such programs as SIL, the Development Ordinance, and the creation of an industrial estate; but the government's policies of confining specific areas of activity to Sierra Leoneans (see Chapter 3) and restricting tax-free repatriation of profits during the period of the tax holiday may tend to offset the stimulus of such programs. The net effects of the government's efforts to stimulate investment are unknown as it is impossible to determine what the investment pattern would have been in the absence of these promotional activities, but it is suggested in this section that the stimulus has been minimal. The basic constraint against industrial expansion in Sierra Leone centers upon Adam Smith's dictum that the division of labor is limited by the extent of the market.

• 6 •

The Mobilization of Resources for Economic Development

The primary economic goal of the Sierra Leone government, like that of most underdeveloped countries, is to increase substantially the rate of economic growth, which, it is hoped, will increase the well-being of its citizens and reduce the disparity between the standard of living in Sierra Leone and the levels prevailing in the more developed countries. In order to attain this goal, it is necessary to provide the social overhead capital and the basic social, political, and economic institutions which will be most conducive to private work, saving, and investment incentives, assuming that a market-oriented economy is to be retained. At the risk of oversimplification, it may be said that the availability of capital, both physical and human, lies at the roots of Sierra Leone's needs and that the addition of capital in conjunction with the other factors would promote or stimulate economic growth. The Sierra Leone government has accepted this basic tenet and has engaged in many activities which it believes will facilitate capital formation. The purpose of this chapter is to examine the specific programs adopted by the government to mobilize resources for economic development and to analyze their actual and potential effects. Section A examines the planning techniques employed by the government; Section B, the development of money and banking and more especially the establishment of a central bank; and Section C, the role of fiscal policy in the development programs. The following analysis indicates that the development plans have been basically ill-designed, that the financial system does not yet provide a satisfactory mechanism for mobilizing funds, and that fiscal policy is somewhat restricted in the context of the Sierra Leonean economy. These conclusions are not

overly surprising; perhaps what is surprising is that progress has been made despite these obstacles.

A. Development Planning

Development planning as a resource mobilization instrument has been employed in Sierra Leone in a largely sporadic and disjunctive manner. Planning agencies have been created to prepare a single plan and have been permitted to lapse without opportunity to enlarge, modify, clarify, or assess their work. As a result, almost all continuity with previous work has been lost when a new planning agency has been organized. This section will review each of the past plans, in terms of criteria set out below, and will show that each of the plans formulated for Sierra Leone is essentially an *ad hoc* capital budget designed to achieve either (1) the construction of a limited number of isolated public goods or (2) the attraction of foreign aid. At the outset, it should be noted that comprehensive economic planning in the sense of absolute control over the allocation of resources has never been attempted or contemplated. In fact, the plans have never sought to integrate the private sector into the overall plan, with the result that reverberations on the private sector from changes in the public sector have never been isolated or estimated. Neither have the planning agencies attempted to formulate a consistent set of quantitative goals amenable to available sets of instruments. Rather the planning agencies have developed a limited number of public projects without specific analysis of the impact of the project either on the sector most directly involved or on the aggregate economy. Each project has been formulated in the hope that some broadly stated qualitative goals might be attained.

Before proceeding to an analysis of the development plans of Sierra Leone, a short summary of an "ideal" planning process will be made in order to form a basis for evaluating the Sierra Leonean plans.[1]

1. There is, of course, no single ideal planning process but a number of ideal processes which depend on the political inclinations of the population under consideration. It should also be noted that considerable literature now exists on the subject of planning procedures in general and as applied to specific countries. See,

The word "planning" here denotes a process by which a course of action or a set of instruments is selected for the achievement of a set of feasible targets or goals or the maximization of the probability of attaining these goals. In order for the plan to be operational, all targets must be quantifiable, and in order for the plan to be rational, the selection of the set of instruments finally employed must be made after all other sets of available instruments have been considered. Stated alternatively, the search for an optimal set of instruments must proceed until the additional costs of inquiry exceed the expected benefits from additional inquiry. The consideration of alternative sets of instruments must include all anticipated consequences of each set of instruments. The final selection of the set of instruments actually applied must be based upon the consensus of the population in regard to the preferred set of consequences.

The remainder of this section will be devoted to an analysis and evaluation of each of the plans promulgated in Sierra Leone. Since the cost of following the planning procedure described above might prove to be prohibitive in terms of the benefits to be derived, the evaluation will not adhere rigidly to the stated criteria.

1. *The 1946 Plan*

In 1945 the Colonial Development and Welfare Act was amended so as to provide £120 million for grants to British colonial administrations for the purpose of fostering their economic growth.[2] The amendment provided that this sum would be divided among the separate colonial administrations on the basis of development plans to be drawn up by the local administrations and submitted to the Colonial Office. In Sierra Leone the machin-

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for example, the bibliography at the end of John Friedmann, "Introduction: The Study and Practice of Planning," *International Social Science Journal*, XI, No. 3 (1959), 334–335; the references at the end of each chapter in E. E. Hagen, ed., *Planning Economic Development*, Homewood, Ill.: Richard D. Irwin, 1963; and the sections on planning in Meier, *Leading Issues in Development Economics*.

2. See Barbu Niculescu, *Colonial Planning: A Comparative Study* (London: George Allen and Unwin, 1958), pp. 57–63.

ery for the formulation of such a plan had been in existence since 1943 when a development and planning officer was appointed to work directly under the colonial secretary. This officer had devoted all his time to the consideration and co-ordination of various proposals for postwar development.[3] He was formally assisted by advisory committees established on both a national and a regional basis, but neither group was functionally operative because the regional groups were unable to formulate regional plans and projects without a national framework and the national group did not actively participate in forming the plan, but merely approved the completed work.[4] Consequently, the resulting plan was written primarily by one man after individual ministries had submitted proposals.

The most immediate objection to the 1946 plan stems from the fact that the goals of the plan are not operational because of their lack of specificity, i.e., the plan merely makes the following general policy statement:

> The object of the development plan now outlined is the improvement of the material welfare of the people in the widest sense along balanced lines, and its various aspects are correlated, and designed to be of mutual assistance. In this connection it is necessary to state clearly that one of the Government's main objects in the development period will be to raise the Protectorate standards, particularly in regard to medicine, health and education, to a higher level than that which they have reached thus far.[5]

The attainment of these non-quantitative and non-specific goals depended upon: (1) the enlargement of the infra-structure, i.e., extension of the existing communication, transportation, and educational systems; (2) the promotion of various agricultural schemes discussed in Chapter 2; and (3) the improvement of social services such as medical care, water, town planning, housing, and the organization of trade unions.

3. Hubert Stevenson, letter prefaced to Childs, *A Plan of Economic Development.*
4. *Ibid.*
5. Sierra Leone, *An Outline of the Ten-Year Plan for the Development of Sierra Leone,* Sessional Paper No. 4 of 1946 (Freetown: Government Printer, 1946), p. 12.

The proposed projects, however, were not related in explicit programs; nor were the projects related to specific goals. The designers of the plan merely stated that "the plans outlined should lead to a steady improvement in the economic position, and consequently in the standard of living. . . ."[6] They realized that each project would interact with other projects but were unable to quantify such interactions beyond the very general conclusion that "the three main groups of proposals are interdependent. Improved standards of health are necessary for increased production which is essential to improve the economic position. Improved standards of education are necessary to provide staff for the expanding services and to enable locally recruited officers to fill more responsible posts both in the public service and elsewhere."[7]

The primitive nature of the plan is emphasized by the fact that the basic constraints of finance, raw materials, and manpower were unknown and could not be included.[8] Thus, completion of even the proposed projects depended upon such fortuitous events as the availability of foreign staff and the ultimate allocation of the grants from the Colonial Development and Welfare Fund.

The designers of the 1946 plan gave no specific indication of the magnitude of the desired change or how such changes, even had they been specified, were to be effected. The designers lacked the necessary framework fixed by Sierra Leonean conditions—e.g., resources, finances, basic information on prices and national income—within which to work. In addition, they appear to have had little conception of the underlying interdependence of the economic system. The plan was a patchwork of projects which were not integrated. The plan was not even a "good" capital budget.

6. *Ibid.*, p. 24.
7. *Ibid.*
8. The Sierra Leone *Progress Report for 1948*, Sessional Paper No. 16 of 1948 (Freetown: Government Printer, 1948), states that the "difficulty in recruiting technical and professional staff, particularly engineers, agricultural officers, doctors and teachers, and delays in obtaining materials have hindered full implementation of many approved projects . . . an understandable feeling of disappointment which is shared by Government has been publicly expressed. It is now clear that the pace of development will be controlled largely by the speed with which the necessary staff can be obtained" (p. 1).

2. *The Childs Plan of 1949*

In 1948, the Sierra Leone government, in an effort to enlarge the scope of the 1946 plan, appointed Hubert Childs, the chief commissioner, to examine the economic system and to recommend measures which would improve the economic well-being of the Sierra Leonean population. The report, published in 1949, stated that the purpose of the proposed plan was "to indicate measures and requirements necessary to achieve a substantial increase in economic production, and therefore the prosperity and welfare of the people of Sierra Leone during the next four or five years."[9] However, in contrast to the 1946 plan, the Childs Plan limited itself to the agricultural sector and attempted to give operational meaning to the phrase "substantial increase in economic production." Childs explicitly stated that "the aim, in regard to agricultural produce, is to double output. . . ."[10]

In order to achieve this stated goal, Childs recommended five specific projects:[11]

1. Improvement of the government railway (£1,250,000).
2. Extension of the road system and construction of bridges (£800,000).
3. Improvement of inland waterways (£20,000).
4. Development of regional communications, transportation, and agriculture by grants to the district councils (£325,000).[12]
5. Development of the oil palm industry (£529,000) through (*a*) distribution of free improved oil palm varieties to local producers; (*b*) introduction of mechanical processing, in-

9. Childs, *A Plan of Economic Development,* p. 1.
10. *Ibid.*
11. *Ibid.*, p. 40.
12. Grants of £5,000 per year were to be made to each of the thirteen districts for five years. Each district was to set up its own development plan and to allocate these grants and other available funds toward the development of those communication, transportation, and agricultural projects deemed most essential. It is interesting to note that in September, 1952, the acting colonial secretary, Dennis Pearle, wrote to Childs urging that the district councils draw the full £5,000 each year for fear that unspent balances might not be revoted in the future (letter from the files of the Ministry of the Interior on the Childs Plan).

cluding fifty Pioneer Oil Mills; and (*c*) development of a pilot oil palm plantation.[13]

It is apparent from the nature of these projects that the *modus operandi* of the Childs Plan consisted primarily of indirect stimuli. The decision to rely upon indirect measures was based on three considerations: (1) Childs's belief that the crucial bottleneck confronting the agricultural sector was the existing marketing facilities,[14] (2) the apparent success of the Department of Agriculture in developing improved varieties of oil palms, and (3) the belief that stabilization of producers' prices through the operations of SLPMB would stimulate production. Childs recognized that his estimates were "open to the objection that imponderable factors, such as those relating to demand and to price and to incentive, can quickly make nonsense of the best of calculations," but he twice reiterated his belief that it is "better to aim and miss than not to aim at all. . . ."[15]

By 1954 almost all the projects advocated by Childs had been completed; however, target production was achieved for only coffee and piassava (neither of which was then controlled by SLPMB), while the export tonnage of palm kernels, palm oil, kola nuts, benniseed, and ground nuts fell. The absolute decline in the exportation of these commodities is in no way attributable to adverse reactions to the Childs Plan but must be related to "imponderables," e.g., the increase in the illicit diamond mining activities and the pricing policies of SLPMB. However, even if the *ceteris paribus* assumptions under which Childs was working had not been violated, it is not clear that the agricultural production targets could have been attained. In other words, it was not known whether the targets were feasible. What was needed was information concerning production relationships and the constraints confronting the agricultural sector, such as the availability of skilled

13. Childs's report suggested that the entire £529,000 necessary for the development of the oil palm industry be drawn from the surpluses of SLPMB. Of the total sum allocated to the development of the oil palm industries, £503,000 was allocated to mechanical processing (*ibid.*, p. 20).

14. *Ibid.*, pp. 19–21.

15. *Ibid.*, pp. 15, 21.

manpower and the fertility of the soil. Once such knowledge had been obtained, targets could have been established and a set of instruments designed which might have allowed target fulfilment. The Childs proposals were devoid of operational significance since they bore no known relationship to agricultural production.

3. *The Ten-Year Plan of Economic and Social Development for Sierra Leone, 1962/63–1971/72*[16]

Following the termination of the 1946 plan and the Childs Plan in 1956, the government allocated its capital expenditures through the capital budget, established in 1946.[17] Under this system individual projects were costed by the various ministries and submitted to the minister of finance for approval. Following evaluation by the minister of finance, the proposals were submitted to Parliament for final approval and appropriation of funds through the capital budget. The capital budget system, however, was considered unsatisfactory because the pattern of spending over the next four or five years could not be derived from the budget. The capital budget merely estimated expenditures for the coming year, total cost of the project, and expenditure to date. Rather than include future expenditure estimates in the capital budget, the Sierra Leone government decided in 1961 to draft a ten-year development plan and commissioned a Sierra Leonean economist, David Carney, to write the plan. The decision to circumvent the capital budget was motivated in part by the growing awareness of the leaders of the country that foreign countries and world organizations allocated their grants to countries with well-developed

16. In 1958 *A Plan for the Development of Kono District* (Freetown: Government Printer, 1958) was formulated but never implemented; it will not be discussed here. This plan was written primarily to appease the political leaders of Kono District who were complaining that Sierra Leone "as a whole benefited by the revenues derived from the diamond industry [but] that Kono District has seen comparatively little return in the way of development particularly from government sources" (p. 3). The political nature of the document is indicated by the fact that the plan noted that projects included "must necessarily be tentative, as in most cases no detailed investigation of projects has been carried out" (p. 11).

17. In keeping with trends of the time, the capital budget was called the development budget beginning in 1960/61.

plans and projects. In order for Sierra Leone to compete, a plan had to be formulated.[18]

To facilitate the task of writing the plan, Carney requested that each ministry prepare individual plans including both goals of the ministry and planned capital expenditure.[19] Since none of the ministries had previously formulated such a plan and prompt return of such information was requested, all submitted plans lacked careful consideration of goals and projects. Several ministries were unable to complete their plans, and the planner was forced to prepare his own estimates for these ministries. These plans, of course, bore little relationship to the desires of the ministry in question. The final draft of the new plan was completed and submitted to Parliament within three months and was approved with little modification in the fall of 1962.

As a consequence of the haste with which the plan was assembled and the continuing "lack of fundamental information about the economy,"[20] the new plan was phrased in terms of the generalities which had characterized the previous plans, e.g., "improving the social and economic condition of the people of Sierra Leone."[21] No attempt was made to quantify this statement, and indeed the author of the plan later admitted that no other alternative existed:

> It is apparent, then, that the social and economic goals expressed in the Sierra Leone Plan have been stated in general normative terms rather than in quantitative terms as targets. This is a direct reflection of the rudimentary nature of planning up to the present, there being neither a properly established planning organization nor a tolerable range of statistics collated and published to aid the tasks of planning. The excuse for attempting to plan in these circumstances must be,

18. *A Progress Report* (1965) clearly reflects this viewpoint when it states: "During the period there has been a noticeable increase in the preference of foreign governments and overseas organizations for 'project' rather than 'plan' type assistance: that is, for well-formulated individual projects with a high priority rating in an overall development plan. The ability to secure external assistance is therefore becoming increasingly related to Government's acceptance of a sound development plan and the ability to formulate individual projects" (p. 82).

19. Information in this paragraph is based on personal interviews with members of the Development Office and official memoranda of that office.

20. Childs, *A Plan of Economic Development*, p. 4. Also quoted in W. C. Hood, R. S. Harris, and D. G. Hartle, *Education and Economic Development in Sierra Leone* (Freetown: Government Printer, 1962), p. 47.

21. Carney, *Ten-Year Plan*, p. 5.

among other principal objectives of the planner, to correct the deficiencies and remove the obstacles to the adoption of planning techniques.[22]

Thus, in terms of the criteria set out above, the plan was non-operational from the very beginning. Moreover, the plan rejected the application of investment criteria per se as having no relevance for a country such as Sierra Leone. The plan categorically stated that

the determination of priorities is often taken to be the starting point in the actual programming of development expenditure. However, in developing countries such as Sierra Leone it becomes an invidious, if not impossible, task to attempt to allocate priorities among areas of the economy that have been very long neglected. An apt comparison would be a situation of general famine in which relief workers try to determine who among the starving human beings should have what priority in the allocation of food and medical supplies. Certainly some of the victims may have more food and others less, according to their needs. But all must be given some food and supplies.[23]

As a result of the rejection of priorities or investment criteria and the inability to set quantitative targets, the plan was denuded of operational or economic significance. Projects in the plan were not related to one another, the private sector was virtually excluded from consideration,[24] the problem of the timing of projects so as to achieve optimal use of scarce manpower and capital was pushed aside, and such aggregate problems as the availability of foreign exchange and the growth and composition of imports were not taken into account.

The failure of the planners to adopt explicit criteria whereby scarce resources could be allocated among competing projects resulted in the formation of an *ad hoc* capital expenditure program, the composition of which depended on sociopolitical ideas, relative bargaining strengths, and the whims of the planner. In

22. David Carney, *The Integration of Social Development Plans with Overall Development Planning in Sierra Leone* (Addis Ababa: Economic Commission for Africa, 1963, E/CN.14/SDP/12), p. 9.

23. Carney, *Ten-Year Plan*, p. 7.

24. Questionnaires were sent to various industries in Sierra Leone asking them to report their expenditure plans for the next five years, but no attempt was made to assess the employment, income, or balance of payments effects of the information received.

Table 27. *Summary of the Development Plan: 1962/63–1971/72 (£ millions)*

Item	Estimated costs of first 5 years	Average costs of first 5 years	Estimated costs 1962/63	Actual development expenditures 1961/62	1962/63	1963/64
Public expenditures						
Capital cost	99	20	27	n.a.	n.a.	n.a.
Recurrent cost	53	11	0	n.a.	n.a.	n.a.
Total	152	31	27	4.2	3	3.5
Private expenditures	25	5	5	n.a.	n.a.	n.a.
Total development expenditures	177	36	32	n.a.	n.a.	n.a.
Public section finance						
Capital costs of domestic finance	53	11	n.a.	1.6	1.6	1.3
External finance	69	14	n.a.	2.6	1.2	2.3

Sources: Carney, *Ten-Year Plan*, p. vi, and Sierra Leone, *A Progress Report*, p. 84.

addition, the final plan grossly overestimated the ability of the government to finance the program. The estimated capital and recurrent costs[25] and the projected means of financing the plan are listed in Table 27. Since only the first five years of the plan were admitted to be complete, the last five years have been omitted. The plan called for a fivefold increase in capital expenditure over the 1961/62 level of £4.2 million to be financed from a fivefold increase in foreign grants and loans and a threefold increase of domestic sources of finance.[26] However, Table 27 reveals that the absolute contribution of both sources has decreased since 1961/62 and that actual development expenditure was lower in 1963/64 than in 1961/62. As a result, few of the proposed projects have begun and the entire plan has been scrapped. A new plan is currently being formulated.[27]

25. Recurrent costs were calculated by multiplying the costs of the previous year by 0.15 and allowing for a 5 per cent increase for the previous year's estimate. There is no indication how these figures were arrived at.

26. The hopes of the plan were set upon a rapid increase in diamond mining (which did not occur) and the creation of a central bank.

27. While the author was in Sierra Leone he had an opportunity to sit in on many of the meetings of the new Development Office. This office is staffed by two Bachelor of Arts economists and headed by a United Nations economist, Robert Clifford, who has been assigned to the Development Office by the United Nations to co-ordinate the new plan. It is the author's opinion that the current planning techniques in Sierra Leone are essentially unaltered from 1961.

Despite the superficiality of the new ten-year plan, its preparation has proven beneficial in several respects: (1) The plan recommends that surveys and censuses of population, national income, housing, balance of payments, transportation, agriculture, labor, and so forth be undertaken. Many of these surveys have already been made or are in progress, and the availability of this information will aid the planning and assessment of future capital expenditures. (2) The various ministries have been forced to assess their long-run programs. As a result, these ministries may be better prepared to design rational programs and projects in terms of criteria handed down by a central planning agency. (3) The government has become cognizant of the fact that a more permanent planning organization is necessary if future plans are to have relevance for the economy. It has therefore established a Development Office (1964) as a part of the Prime Minister's Office[28] and a National Planning Council (1965). The latter organization has been delegated the tasks of periodically reviewing the economic position of the country, approving future plans, reviewing and formulating economic policies, and approving annual development proposals to implement the development plans.[29] While the council will have unofficial status, the inclusion of the representatives of various organizations such as the central bank, chambers of commerce, the economics department of Fourah Bay College, and the Labour Federation will permit a wider spectrum of viewpoints to be heard.

In summary, the *Ten-Year Plan of Economic and Social Development for Sierra Leone, 1962/63–1971/72* was an unintegrated, *ad hoc* capital expenditure program. The rudimentary nature of the plan was clearly recognized by its author, and steps are now being taken to correct the more obvious defects of that plan and capital expenditure techniques in Sierra Leone. The future success of capital expenditure programs depends upon the creation of adequate machinery to assess the present economic situation,

28. Before the establishment of this office in 1964, the Development Office was a part of the Ministry of Finance.

29. Robert S. Clifford, "Proposal for a National Economic and Social Development Council" (Freetown: mimeographed, Feb. 8, 1965). This council replaces the former Cabinet Co-ordinating Committee on Development Projects and the Economic Policy Co-ordinating Committee. These committees met infrequently and acted primarily to approve policies and plans rather than formulate them.

the availability of more and better data, and the ability to design investment criteria in light of constraints such as the availability of manpower, foreign exchange, and domestic resources.

B. Money and Banking

The present section examines the past and present financial institutions of Sierra Leone and the possibility of expanding economic growth by reliance on the domestic financial system. The analysis indicates in general that the existing financial system makes little contribution to the thorough mobilization of resources desired by the government. This statement should not be interpreted to mean that the past or future contributions of the financial sector to economic development have been or will be negligible, but that at present the marginal contribution of this sector is small. It is suggested that the major contribution which the financial sector can make in the immediate future is the preservation of the internal and external value of the currency. This task will be difficult since the central bank currently lacks policy instruments able to alter the credit policies of the commercial banks and since the central government is likely to encroach upon its statutory autonomy; but all efforts to mobilize resources for development may be vitiated through rapid inflation if this autonomy is lost.

1. *The Institutional Setting*

The mobilization of funds for economic development through the existing financial system is limited by several constraints which have largely disappeared in the more economically advanced Western countries. While a rigorous quantitative comparison of the financial and monetary systems of Sierra Leone and, say, the United States cannot be made because of the lack of data and an adequate framework for comparison, qualitative differences tending to limit the intermediating abilities of the financial sector may be noted. Perhaps the most basic constraint is the dominant role of currency in the monetary sector of the econ-

omy.[30] Sierra Leoneans appear to possess a distinct preference for holding currency and coin rather than income-earning assets.[31] This preference is undoubtedly interrelated with the scarcity of local income-earning assets, low incomes, a high preference for liquidity, and perhaps a misunderstanding of the functions of banks and other saving institutions; but this preference inhibits the organization of new financial institutions and restricts the expansion of existing institutions. Moreover, the prevailing system of land tenure and the limited size of the industrial sector, which is largely foreign financed, have sealed off traditional outlets for bank loans. As a result, both money and capital markets are underdeveloped; the market for government securities of any maturity is narrow; private savings tend to be invested in assets which remain under the direct control of the saver, e.g., real estate, land improvements, foreign exchange, and inventories; commercial banks concentrate on short-term loans to foreign trade and domestic commerce; and other financial intermediaries are embryonic.

The limited size of the money market and concomitantly the development of financial institutions are reflected by the ratio of coin and currency[32] to the total money supply where the latter is defined either as currency plus demand deposits or as currency plus demand, time, and savings deposits. From Table 28, it can be seen that coins and currency comprised more than 60 per cent of either definition of the money supply between 1950 and 1953 and over 75 per cent since 1953. In comparison, the currency and coin component of the money supply (defined as currency plus demand deposits) of both the United States and the United Kingdom has been below 30 per cent throughout the twentieth cen-

30. As noted in Chapter 2, the use of money is widespread in Sierra Leone, but as much as 50 per cent of GDP may be attributable to non-market transactions.

31. Before 1954, coins comprised over half of the total sum of currency and coin (Great Britain, Colonial Office, *Annual Report on Sierra Leone,* London: H. M. Stationery Office, various years).

32. The determination of the quantity of coin and currency in Sierra Leone is rendered exceedingly difficult because of the former West African currency system. A common currency existed for the Gambia, Sierra Leone, Ghana, and Nigeria, and traders carried the currency from one country to another. As a result, records of currency issued within a country need not correspond with currency actually in circulation.

Table 28. *Currency element in the money supply: 1950–61*[a]

Year	(1) Coin and currency[b] (£ millions)	(2) Coin and currency plus demand deposits (£ millions)	(3) Coin and currency plus all bank deposits (£ millions)	(1) as a percentage of (2)	(1) as a percentage of (3)
1950	2.3	3.4	3.7	68	62
1951	4.3	5.7	6.0	75	72
1952	3.2	4.9	5.2	65	62
1953	3.6	n.a.	5.7	n.a.	63
1954	8.7	10.1	11.1	82	78
1955	9.7	12.2	12.7	80	76
1956	11.7	14.6	15.4	80	76
1957	13.4	16.5	17.4	81	79
1958	13.9	17.0	18.2	82	76
1959	13.3	16.2	17.6	82	76
1960	13.7	16.6	18.2	83	75
1961	14.7	18.1	20.1	81	73

a. Years after 1961 not available.
b. All years for December 31.
Sources: Great Britain, Colonial Office, *Annual Report on Sierra Leone*, various years, and J. B. Loynes, *Report on the Future of the Currencies of Sierra Leone and the Gambia* (Freetown: Government Printer, 1961), p. 7.

tury, and the currency element of the money supplies of such underdeveloped countries as Brazil, Venezuela, and Chile is less than 50 per cent.[33]

Because of the restricted scope of the financial sector and the constraints noted above, the contribution of the financial sector to economic development has been sorely limited in the past, and its future contribution depends upon the emergence of new saving habits, greater saving out of current income, and the development of institutions which will complement these new habits. In other words, incomes must rapidly increase and the risks of holding income-earning assets must be sharply reduced.

2. *Commercial Banking*

Commercial banking activities in Sierra Leone are currently restricted to the operations of three expatriate banks maintaining

33. Edward Nevin, *Capital Funds in Underdeveloped Countries* (New York: St Martin's Press, 1961), p. 3.

branches in Freetown and other centers of commercial activity. Until 1963 when Intra Bank, headquartered in Lebanon, began banking operations in Sierra Leone, commercial banking was controlled by two British-controlled banks, the Bank of West Africa and Barclays Bank. The Bank of West Africa was established in 1894 "with the object of providing bank services for the British trading enterprises and British colonial administrations,"[34] and Barclays Bank D.C.O. was founded in 1917 for essentially the same reason.

The historical linkage of the commercial banks to Great Britain has resulted in the creation of a banking system which operates as if it were an integral part of the metropolitan system. More specifically, the banking system of Sierra Leone, like the banking systems of other colonial areas, has been organized as a branch bank which either accumulates funds to be loaned out by more active foreign branches or which loans out funds accumulated from other relatively inactive branches. As a result of this integrated network of branch banks, the practices and policies of commercial banks in Sierra Leone are similar to the practices and policies pursued in other British colonial areas, since directives to the individual branches originate from a common center. This means in effect that the conventions and standards of commercial banking in Sierra Leone have foreign roots and may not be readily assimilated by the population or modified by the banks with the rapidity desired by certain nationals. For example, the foreign standards are frequently blamed for the banks' "unwillingness to help African businessmen or to extend credit facilities to them."[35] Insufficient data and information are available to test this hypothesis empirically, but if systematic discrimination does (did) exist it is (was) not based on color but on profit considerations. The commercial banks were originally formed to finance the credit needs of the large, expatriate, import and export firms, and the banks' continuing existence is prima facie evidence of the profitability of such operations. The profitability of these operations,

34. W. T. Newlyn and D. C. Rowan, *Money and Banking in British Colonial Africa* (Oxford: Clarendon Press, 1954), p. 74.
35. Cox-George, *Report on African Participation*, p. 47.

however, depended in large part upon their ability and position as branch banks of London banks, i.e., they were able to transfer large sums of money accumulated in Sierra Leone and lying idle to the London market.[36] The problem immediately posed is why these funds were not lent to indigenous entrepreneurs. No clear-cut answer can be given, but Newlyn and Rowan have suggested a number of possible explanations, all pertaining to the inability of the African to meet the credit standards set by the banks. The alleged rationale of the banks' policy may be thus summarized: (1) the majority of the Africans fail to keep accounts of their commercial activities, (2) the Africans are unable to provide suitable security for loans, and (3) the Africans are unreliable in financial matters.[37] Regardless of the validity of these arguments, the fact that the banks apparently believed the arguments is sufficient reason to limit credit to Africans. In other words, the bankers considered the loans too risky to be made. It is, however, frequently reiterated that bankers should "adapt themselves to the new context and be more flexible in their methods of dealing with Africans."[38] The irrationality of such a plea from the bankers' point of view need not be discussed; it should merely be pointed out that the banks are profit-making and not charitable organizations. Such flexibility can only be adopted when the banks are reasonably assured that loans granted will be repaid, and their eagerness for profits would assure that profitable loan possibilities would not be turned down. The alteration of the existing credit policies of the banks would thus appear to be dependent upon a change in African business practices rather than a lowering of credit standards. One might also argue that if profit possibilities were as large as sometimes intimated, the former ease of entry into commercial banking would quickly have reduced returns to a "normal" level.[39]

36. The extent of the transfers of money will be dealt with below. Local demands for accumulated savings were somewhat restricted because some of the large firms, e.g., United Africa Company, did not use bank credit (Newlyn and Rowan, *Money and Banking*, p. 80).

37. *Ibid.*, pp. 81–82.

38. Cox-George, *Report on African Participation*, p. 51.

39. Until 1964 there were no legal restrictions on entry into the banking field. A firm merely had to be granted a charter under the Companies Act. However, under the Banking Act, 1964 (para. 6), no firm will be granted a banking license unless it has a paid-up capital of £200,000. This provision may bar the establishment of a privately owned African bank for many years.

Table 29. *Commercial bank operations: 1943–63*

Year	Local assets (£ 000)			Local liabilities (£ 000)			Local assets as a percentage of local liabilities
	Loans and advances	Other[a]	Total	Deposits	Other[b]	Total	
1943	30	159	189	2,096	18	2,114	8.9
1944	19	175	194	2,430	30	2,460	4.9
1945	22	131	153	3,398	0	3,398	4.5
1946	54	234	288	2,866	100	2,966	9.7
1947	91	128	219	2,035	1	2,036	10.8
1948	66	162	228	1,646	36	1,684	13.5
1949	144	253	397	1,567	22	1,589	25.0
1950	284	227	511	1,423	16	1,439	35.5
1951	263	231	494	1,736	4	1,740	28.4
1952	363	354	717	2,042	14	2,056	34.9
1953	432	262	694	2,129	23	2,152	32.2
1954	643	461	1,104	2,370	0	2,370	46.6
1955	749	399	1,148	2,995	28	3,023	38.0
1956	1,077	899	1,976	3,691	55	3,746	52.7
1957	1,815	693	2,508	4,058	10	4,068	61.7
1958	1,990	697	2,687	4,269	73	4,342	61.9
1959	1,995	476	2,431	4,288	23	4,311	56.4
1960	2,730	666	3,396	4,522	86	4,608	73.7
1961	3,511	664	4,175	5,382	31	5,413	77.1
1962	4,992	739	5,731	6,262	71	6,333	90.5
1963	6,989	930	7,919	6,370	81	6,451	122.8

a. Currency holdings and balances due from the local banks.
b. Balances due other local banks.
Source: Sierra Leone, Ministry of Finance.

Despite the comments above concerning the stringency of the banks' lending practices, there is some indication that banks in Sierra Leone have altered their credit policies. The aggregate nature of the data presented in Table 29, however, prevents ascertainment of whether Africans have benefited from the change.[40] The data exhibit a phenomenon which has been noted in many underdeveloped countries—whether they are colonies, former colonies, or independent nations[41]—namely, that until recently

40. Only aggregate figures are available since neither Barclays nor the Bank of West Africa publishes balance sheets for their activities in Sierra Leone. They do, however, file separate balance sheets for the use of the Ministry of Finance and it is from these figures that the data are taken. The banks do not break down loan data on the basis of type or size of loan.

41. See, for example, Nevin, *Capital Funds*, pp. 49–51, for an account of savings flows from British colonial areas to London, and A. R. Conan, *Capital Imports into Sterling Countries* (London: Macmillan, 1960), chap. i, for an account of similar flows from Egypt, Mexico, and Haiti.

the commercial banking system has served as a mechanism for funneling savings into Great Britain and away from Sierra Leone. Table 29 shows that the ratio of local assets (primarily loans and advances) to local liabilities (primarily deposits) was as low as 4.5 per cent in 1945 and did not exceed 50 per cent until 1956. Since that time, local asset holdings by the commercial banks have expanded almost sevenfold while local liabilities have only doubled. The acceleration of commercial bank loans to the private sector is further emphasized by the fact that Sierra Leonean banks are now net borrowers of funds from abroad (£2.9 million in 1963) instead of net lenders (£3.2 million in 1945).[42] The magnitude of credits to the African sector cannot be determined, but one would suspect that the flow is still minimal.

In summary, commercial banks have been established in Sierra Leone for over seventy years, but they have centered their services upon the large expatriate commercial firms. Surplus savings were channeled into the London money and capital markets and away from Sierra Leone, and the channeling of funds away from Sierra Leone resulted primarily from the lack of suitable demand for such funds in Sierra Leone. This movement of funds has been checked only since the mid-fifties, and the present composition and size of loans is unknown.

3. *Central Banking*

Prior to the establishment of the Bank of Sierra Leone in 1963, commercial bank operations were unregulated by any central agency, and the issuance of currency was vested solely in the West African Currency Board (WACB). The WACB possessed no banking powers, functions, or discretionary controls over the supply of currency;[43] it merely served as a mechanism for exchanging sterling for West African currency (and vice versa) and investing the sterling proceeds of these transactions in securities

42. Ministry of Finance data.

43. For a more detailed account of the origin and operation of WACB, see Newlyn and Rowan, *Money and Banking*, chaps. i and iii, and J. B. Loynes, *The West African Currency Board, 1912–1962* (London: West African Currency Board, 1963).

approved by the secretary of state. The security purchases were normally restricted to British government securities, but following the grant of fiduciary powers to the colonial currency boards in 1954, WACB invested £2 million in Sierra Leonean government securities.[44] The revenue generated from the interest on these securities plus premiums on currency issues and redemptions over and above the operating costs of the board was distributed among the four participating British West African colonies.

From 1912 until the late fifties, the board fulfilled its primary task of providing complete convertibility of West African currency for sterling and, following the withdrawal of Ghana and Nigeria in 1957 and 1958, was able to redeem its currency in both countries without impairing its obligations to the Gambia and Sierra Leone. The withdrawal of these two countries curtailed only the extent of the board's operations, and it continued to function as before. With the approach of the political independence of Sierra Leone in 1961, the government of Sierra Leone decided to follow the course of Ghana and Nigeria and commissioned J. B. Loynes to investigate the monetary situation and to make recommendations concerning the provision of a new monetary framework. In the 1961 report, Loynes recommended against the establishment of a simple currency board, since the future development of the country required a more comprehensive monetary authority.[45] At the same time, he did not believe that the commercial banking system was developed sufficiently to warrant the establishment of a central bank. Hence, he recommended the formation of an enlarged currency board, the Monetary Institute, which would "issue legal tender currency in Sierra Leone, . . . maintain external reserves in order to safeguard the internal value of the currency and . . . promote monetary stability and a sound financial structure in Sierra Leone."[46] The Monetary Institute would have no banking functions or supervisory powers over

44. The assets acquired by WACB were: (1) January, 1957—£1.0 million nominal 5¾ per cent Stock 1977/82 and (2) September, 1958—£1.0 million 6½ per cent Stock 1973/78 (J. B. Loynes, *Report on the Future of the Currencies of Sierra Leone and the Gambia*, pp. 11–12). Sierra Leone was the only West African country permitted to sell local stock to the Currency Board.

45. *Ibid.*, p. 16.

46. *Ibid.*, p. 4.

commercial banks, but it would be able to buy and sell obligations of the Sierra Leone government. The primary merit of the institute was that it would need only a small staff and building and thus would be much less costly than a full-fledged central bank.

Nevertheless, despite the Loynes recommendations and the more unorthodox proposals of J. O. W. Olakanpo, who challenged the Loynes Report, Sierra Leone established a "traditional central bank."[47] The phrase "traditional central bank" is used here to connote the idea that the objectives and procedures of the new central bank, the Bank of Sierra Leone, closely follow those of the older central banks and that no reliance is placed on new control devices. In fact, the objectives of the Bank of Sierra Leone are somewhat conspicuous by their failure to refer to the goal of economic growth or development, especially when it is remembered that David Carney thought that the establishment of a central bank would greatly facilitate the financing of his ten-year plan.[48] The stated objectives of the bank are limited to:

1. The issuance of currency and the maintenance of external reserves to safeguard the international value of the currency.[49]
2. The keeping of government funds and the advisement of government on financial matters.
3. The promotion of monetary stability and a sound financial structure.[50]

In order to attain these objectives, the Bank of Sierra Leone was empowered with the sole right to issue currency, the right to discount bills or acceptances of bona fide commercial transactions at rates established by the bank, the right to purchase and sell government securities maturing in less than twenty years, and the

47. "The Loynes Report and Banking in Sierra Leone," *Bankers Magazine,* CXCIV (July, 1962), 19–28. Olakanpo sought the establishment of a central bank empowered with commercial bank functions, since it would be less profit conscious. The need for stressing non-profit considerations stems from his belief "that lending to Africans is a business fraught with great risks owning to the comparative financial unreliability of African businessmen and their lack of adequate and acceptable banking collateral" (p. 26).

48. Carney, *Ten-Year Plan,* p. iv.

49. The conversion of West African currency for the new decimal Leone (Leone equals \$1.40 or 10 shillings) began in August, 1964, and is expected to continue for several years (Sierra Leone, *Report on the Currency Conversion of the Bank of Sierra Leone,* Freetown: Government Printer, 1965).

50. Bank of Sierra Leone Act, 1963, para. 5.

power to establish minimum liquidity ratios.[51] The employment of these policy instruments as a means of pursuing the stated goals, however, is largely ineffectual for three reasons.

First, commercial bills or acceptances as defined in the Banking Act are virtually nonexistent in Sierra Leone and none have been discounted thus far by the bank. Moreover, any bank rate set by the Bank of Sierra Leone will prove to be ineffective in restricting loans and advances as long as additional funds may be supplied to the commercial banks by the parent metropolitan banks. These banks are in reality the relevant banks of last resort for the commercial banks; and unless the Bank of Sierra Leone is empowered to halt or restrict these intrabank flows of funds, the discount mechanism can be easily circumvented and is thus unlikely to prove an effective means of curtailing loans to local businesses.

Second, the domestic market for Sierra Leonean government securities lacks "depth, breadth and resiliency," so that open market operations at the present stage of development of the money and capital markets would be correspondingly ineffectual. Even if a market for government securities existed, open market operations would be confined to the purchase of government securities until the bank's stock of government securities increases beyond its present level.[52]

Finally, the liquidity ratios established for commercial banks allow them to count all vault cash, reserves at the central bank, net balances at any bank in Sierra Leone, money at call in Sierra Leone, treasury bills maturing in less than ninety-one days, and all bills of exchange and promissory notes eligible for rediscounting in calculating liquidity reserves. The liquidity ratio is currently set at 15 per cent and the banks traditionally hold approximately 30 per cent of their assets in such forms,[53] so that the present legal reserve requirement poses no threat to the asset

51. *Ibid.*, para. 30.

52. The balance sheet of the Bank of Sierra Leone for January 30, 1965, shows that the bank owns only £11,400 of Sierra Leonean government securities versus £6.9 million of British government securities (*Sierra Leone Gazette,* Feb. 25, 1965, p. 197). Bank holdings of Sierra Leonean government securities may not exceed 20 per cent of its total demand liabilities after securities rediscounted by the commercial banks have been subtracted out.

53. Information from an interview with G. M. MacDonald, director of research, Bank of Sierra Leone.

structure of the commercial banks. Should the reserve requirements restrict the lending ability of the banks in the future, there is no provision preventing the importation of funds from the parent banks.

Thus, the orthodox policy instruments as presently used and adapted to Sierra Leone are ineffective regulators of the supply of credit. The Bank of Sierra Leone does, however, possess one selective control measure which, if applied, could curtail the loaning activities of the commercial banks. The bank has the authority to prescribe the maximum amount of loans or advances which a bank may have outstanding for either all loans in general or specified loan categories.[54] The amount so set, however, may not be lower than the amount outstanding at the time the banks are notified of the institution of this policy.

It should not be inferred from what has been said above that the Bank of Sierra Leone may not prove to be beneficial to the long-run growth of the economy, for the bank may be able to stimulate the growth or emergence of a local money and capital market. However, the Bank of Sierra Leone, as presently constituted and operated, appears to represent primarily a symbol of the break with the old colonial regime rather than a resource mobilization instrument. Moreover, the contribution which any financial institution can make toward economic development is dependent on the growth of the saving and banking habit among the people, on increased incomes, and on other factors lying outside the immediate power of the central bank. The bank may contribute to the development of these habits by providing financial and monetary stability, but these results could be and were provided by a much simpler and less expensive organization.

4. *Other Financial Institutions*

In previous chapters various credit institutions designed to mobilize and disperse financial resources for specific sectors of the

54. Various Asian and Latin-American central banks have similar powers. See Peter G. Fousek, *Foreign Central Banking: The Instruments of Monetary Policy* (New York: Federal Reserve Bank of New York, 1957), p. 80.

Sierra Leonean economy have been discussed, and these institutions will not be reconsidered here. The concentration of this section will be on the Development Loans Act of 1965, the proposals to establish either a commercial or a development bank operated by the government, and the Post Office Savings Bank.

In early 1965 the Parliament of Sierra Leone enacted the Development Loans Act which authorizes the government to sell Sierra Leone Development Stock, the proceeds of which are to be used to finance the general economic development of the country. These stocks, which are offered for sale only in Sierra Leone, are designed to attract funds from both large and small investors through the following features: interest rates ranging from 5 to 7 per cent, the waiving of the income tax on interest received, and the acceptance of offers as low as £5.[55] The first issuance of development stocks occurred in May, 1965, when £500,000 of 5½ per cent stock maturing in three years and £100,000 of 6 per cent stock maturing in nine years were offered to the public. The total impact of the loan on the supply of savings cannot yet be ascertained, but the overall contribution of the stock to future growth may be somewhat reduced if present holders of savings accounts or members of various co-operative credit societies exchange these assets for the new stock. Still, the result could be very favorable if hoarders are induced to dishoard or non-savers are induced to save. At present, no analysis of the sources of funds used in purchasing the stock has been made, and it is unlikely that this will be done in the near future.

The government of Sierra Leone has also considered the establishment of a commercial bank or a development bank as a means of accumulating additional financial resources. The government initially favored the setting up of a state commercial bank, but since mid-1964 the consensus has swung toward a development bank. The object of either bank is to channel funds into areas currently avoided by the expatriate commercial banks, but the motivation for the establishment of either bank is the lure

55. One feature of the act designed to foster the banking habit is that interest, paid twice yearly, can only be credited to a bank account ("Development Loan Scheme Launched," *Sierra Leone Trade Journal*, V, April–June, 1965, 78).

of foreign capital. As the 1964/65 Budget Speech stated, "An advantage of this type of bank [commercial] would be that capital could be raised through international organizations, e.g., the International Bank for Reconstruction and Development and the Commonwealth Development Finance Corporation. . . ."[56] The basic issue, however, is not the type of institution to be created but whether sufficient demand exists for the services of either institution. No survey of domestic or foreign demand for loanable funds has been made, and the allocative effects of "subsidizing" loans to new or expanding firms through "low" interest rates or sustaining losses on operations have not been considered. The lack of basic data and information is emphasized by a recent study paper of the Bank of Sierra Leone which states: "Obviously an adequate market must exist for its [the development bank's] services. In Sierra Leone it has yet to be established that there is a demand for these services."[57] Thus, until the demand for loanable funds is thoroughly investigated, the creation of either bank would appear to be premature.

In addition to the public and private financial institutions discussed above, the government also operates a Post Office Savings Bank. The total deposits of this bank have grown very slowly in the post-World War II period, from £1 million in 1945 to £1.6 in 1961/62, and the future of the institution is in doubt.[58] The period of most rapid deposit expansion occurred between 1952 and 1956, with deposits increasing from £1.1 million to £1.5 million, but since that time the deposit activity has remained static. It is of interest that almost £1 million of the total deposits have been invested in foreign government securities so that the bank has served as yet another mechanism for channeling savings away from Sierra Leone.[59]

In summary, it can be seen that the growth in the total stock of

56. Sierra Leone, House of Representatives, *Parliamentary Debates,* Vol. IV (March 25, 1964), Budget Speech 23.

57. Sierra Leone, Bank of Sierra Leone, "Notes on the Establishment of a Development Bank" (Freetown: mimeographed, Oct., 1964), p. 5.

58. Sierra Leone, Post Office Savings Bank, *Report on the Post Office Savings Bank, 1961/62* (Freetown: Government Printer, 1963), p. 4. This report, which is the latest published report, suggests that the assets of the Post Office Savings Bank will be taken over by the Bank of Sierra Leone.

59. *Ibid.*, pp. 8–9.

money and the increase in the ratio of currency to the total stock of money reflect the dissemination of money-using habits and the growth of the economy since World War II. Commercial banks have played a major role in this dissemination by providing branch offices in most of the major cities and towns and by providing loans to local businesses. The loan policies of the commercial banks appear to have changed during the past twenty years, for funds are now being channeled into, rather than away from, Sierra Leone; however, the continuing claims of bank discrimination suggest that bank operations still revolve more toward the credit needs of expatriate firms than toward the needs of local entrepreneurs, who generally cannot meet the credit standards established by the banks. The inability of the major financial institutions to bring savers and investors together has undoubtedly restricted economic growth, and the resolution of the problem lies with the African businessmen. They must demonstrate to the banks that loans can be profitably made to Africans. In this connection, it should be observed that even the governmentally operated Post Office Savings Bank has lent primarily to foreign rather than to domestic borrowers. This practice may, however, be related more to the dearth of Sierra Leonean borrowers than to the application of high credit standards.

The government is actively attempting to foster a domestic money and capital market through the establishment of a central bank, the enactment of the Development Loans Act of 1965, and the proposed creation of a governmental commercial or development bank. It is suggested in this section that the creation of a central bank in Sierra Leone has been somewhat premature as the Bank of Sierra Leone cannot perform the orthodox functions of central banks. The bank's major function is to provide a stable currency, a function adequately handled by the former West African Currency Board. The Development Loans Act may provide an efficient mechanism for obtaining small amounts of capital funds, but unless a ready and continuous market for such securities can be developed, it is doubtful whether large sums can be raised from the liquidity-conscious African. Finally, a state commercial or development bank may be more willing to lend to

African borrowers than the existing commercial banks, but even a state organization must screen its loan applicants if it is to retain the confidence of the people.

The general conclusion of the present section can now be stated. At the present stage of development, the possibilities of mobilizing substantial amounts of resources for development through financial institutions alone are limited. The contribution any financial institution in Sierra Leone can make toward economic growth is dependent upon the development of increased incomes, of saving habits by a large portion of the population, and of other factors outside the immediate control of financial institutions. The major contribution which the existing financial institutions can make is the provision of a stable financial system in which these habits can be developed.

C. Fiscal Policy

For analytical purposes, fiscal policy may be segmented into three distinctive but interrelated branches: the stabilization, distribution, and allocation branches.[60] In an underdeveloped country such as Sierra Leone, the stabilization and distribution branches are typically de-emphasized, and policy makers focus their attention primarily on the allocation branch which is designed to accomplish each of the following functions:[61] (1) Curtail consumption and free resources for the public sector. (2) Provide funds to effect the resource transfer. (3) Reallocate resources from investments (either public or private) which contribute "little" to economic development toward those investments with greater benefits. (4) Provide incentives which will tend to promote economic development. The ability of the allocation branch to accomplish these functions depends in part upon the administration of the other fiscal branches. This is especially true in the case of the fourth function listed above, since incentives to work,

60. See Richard A. Musgrave, *The Theory of Public Finance* (New York: McGraw-Hill, 1959), chaps. i and ii.
61. See John F. Due, *Taxation and Economic Development in Tropical Africa* (Cambridge, Mass.: M.I.T. Press, 1963), pp. 144–146.

save, and invest may be related more to the distribution of income than to the allocation of resources. These four functions are, of course, performed by all governments regardless of the country's stage of economic development, but the third and fourth may be de-emphasized in the more developed countries and the first de-emphasized in the less developed countries.[62]

Ideally, explicit examination should be made of each of the four functions in terms of the fiscal administration of Sierra Leone, but the lack of knowledge concerning incentive responses of the population[63] and the examination of investment planning (see Section A above) force this section to concentrate on the structure of taxation and expenditure in Sierra Leone. Emphasis will be placed primarily on the fiscal policy of the central government.

1. *Local Taxation and Expenditure*

Local taxation in the provinces of Sierra Leone is confined to a flat-rate tax levied on adult males. The local native administration determines the amount of the tax, which may not exceed thirty shillings, and is responsible for its collection.[64] Two-fifths of the levy may be precepted by the district councils, but the councils usually take only ten shillings from each taxpayer. The local tax arose out of the desire of the British government to reduce the reliance of the colony upon customs duties and grants from Great Britain and to force the population out of subsistence pursuits and into the cash markets. However, since the levy was set at the low level of five shillings per house between 1898 and 1934, its total impact as a revenue and incentive measure has been minute. The

62. Calvin B. Hoover, "Economic Reform vs. Economic Growth in Underdeveloped Countries," in J. H. Hallowell, ed., *Development: For What?* (Durham, N.C.: Duke University Press, 1964).

63. The only evidence which can be marshaled concerning incentive aspects of taxation in Sierra Leone pertains to export taxes studied in chap. iii.

64. Abuses of the collecting system were corrected following the 1955 riots. The cause of the riots is usually attributed to overcollection of the tax by the responsible chiefs and the raising of the tax rate to twenty-five shillings. The tax began as a central government hut tax in 1898 levied at the rate of five shillings. In 1937 a four-shilling local tax was added, and the whole tax became a local levy following the 1955 riots. (See Great Britain, *Report on Disturbances in the Provinces*, London: Crown Agents for Overseas Governments and Administrations, 1956, and Ursula K. Hicks, *Development from Below*, Oxford: Clarendon Press, 1961, pp. 195–205.)

Table 30. *Structure and composition of domestic revenues: 1950–1963/64*[a] *(£ 000)*

Source	*1950*	*1953*	*1955*	*1957*	*1959/60*	*1961/62*	*1962/63*	*1963/64*
Customs and excise	1,446	2,810	4,263	5,888	5,357	6,397	6,882	7,472
	(47.9)	(50.7)	(61.5)	(60.0)	(54.0)	(48.6)	(45.2)	(48.4)
Import	1,196	1,950	3,544	5,211	4,663	5,537	5,639	6,435
	(39.9)	(33.4)	(51.1)	(53.8)	(47.0)	(42.0)	(40.5)	(41.7)
Export	250	946	705	613	671	779	499	615
	(8.2)	(17.1)	(10.2)	(6.3)	(6.8)	(5.9)	(3.6)	(4.0)
Excise	0	0	0	0	0	51	11	395
	(0)	(0)	(0)	(0)	(0)	(0.4)	(0.8)	(2.6)
Direct taxes	1,045	2,003	1,519	2,310	1,448	3,110	2,850	4,120
	(35.6)	(36.2)	(21.9)	(23.9)	(25.0)	(22.8)	(20.5)	(26.7)
Companies	n.a.	1,856	1,348	2,061	2,016	2,458	2,302	3,720
		(33.5)	(19.4)	(21.3)	(20.3)	(18.7)	(16.6)	(24.1)
Personal	n.a.	147	170	121	322	551	548	400
		(2.7)	(2.5)	(1.2)	(3.2)	(4.2)	(3.9)	(2.6)
Licenses and fees receipts	381	510	720	115	1,531	2,401	2,879	2,953
	(12.6)	(9.2)	(10.4)	(11.5)	(5.4)	(18.2)	(20.7)	(19.1)
WACB distributed profits	45	42	46	94	284	822	830	750
	(1.5)	(0.8)	(0.8)	(1.0)	(2.9)	(6.7)	(6.0)	(4.9)
Other[b]	99	173	385	271	260	545	1,066	137
	(3.3)	(3.1)	(5.6)	(2.8)	(2.6)	(4.1)	(7.7)	(0.9)
Total	3,016	5,538	6,933	9,688	9,917	13,175	13,907	15,432

a. Percentage of total tax take of each figure is given in parentheses below the absolute figure.

b. Includes gross receipts of port and marine, postal, and electrical services as well as receipts of Rice Department, Forest Industries, and Alluvial Diamond Licenses.

Note: Absolute and percentage figures of subtotals may not sum to exact level of major categories because of the exclusion of minor subtotals.

Sources: Sierra Leone, Ministry of Finance ,*Financial Report*, and *Estimates of Revenue and Expenditure* (Freetown: Government Printer, 1950–64).

flat-rate tax is regressive in terms of income, but the equity problem of the tax at its past and present levels should not be exaggerated. Should greater revenue be desired the tax could be made progressive, although progressivity would destroy the tax's administrative simplicity.

2. Domestic Revenues of the Central Government

The primary sources of Sierra Leone's domestic revenues are listed in Table 30 for the period 1950–1963/64. The table reveals that the greatest increase in domestic revenues occurred between 1950 and 1957, when revenues increased at an average annual

rate of 17 per cent; since that period, revenues have grown at an average rate of 7 per cent per year. The rapid expansion of revenues corresponds to the proliferation of diamond mining in the early fifties and appears to reflect the high marginal propensity of the diamond miners for imported goods; and the decline in the rate of increase of revenues occurred simultaneously with the leveling off of alluvial diamond production.[65] The table further reveals that customs duties have been the largest source of revenue during the period under consideration but their relative importance has declined from the peak levels attained in the mid-fifties.[66] The reduction in the relative importance of customs duties in Sierra Leone's tax structure has not, however, been offset by a corresponding relative increase in direct taxes, i.e., personal and corporation income taxes. The share of direct taxes has fallen from a high of 36.2 per cent in 1953 to a low of 20.5 per cent in 1962/63, while the share of revenue from licenses, fees, and user receipts has increased from 12.6 per cent in 1950 to 20.7 per cent in 1962/63 and the share of distributed profits from WACB has increased from 1.5 per cent to 6.0 per cent over the same period. This latter source of income is no longer available since Sierra Leone withdrew from the Currency Board, although a similar but smaller figure should appear in future years from the operations of the Bank of Sierra Leone.[67]

The relative decline in the importance of direct taxes does not reflect an absolute reduction in their tax take; rather, it reflects the failure of these taxes to expand as rapidly as other sources of revenue. This phenomenon may be explained by two factors: (1) the pre-existing level of corporate taxation and (2) the small-

65. Ursula K. Hicks reports that in 1957 "the government was in a financial crisis due very largely to the fall in import duty consequent on the expulsion of high-spending alien diamond-hunters" (*Development from Below*, p. 202).

66. Due's study, *Taxation and Economic Development in Tropical Africa*, shows that customs duties in 1961 constituted the largest share of revenue for the following countries: Uganda, 76 per cent; Nigeria, 79 per cent; Ghana, 85 per cent; and Zanzibar, 90 per cent (p. 26).

67. The figure will be smaller because of statutory restrictions on the disposal of the bank's profits. The bank must pay one-quarter of its net profits into a special general reserve fund and one-quarter of the remainder must be applied to the redemption of government securities held by the bank. The remainder is then paid into the government's Consolidated Revenue Fund (Bank of Sierra Leone Act, 1963, para. 8).

ness of the tax base for personal income and the low rates of taxation applied to these incomes. In regard to the first factor, the corporation income or profits tax was set at 37.5 per cent throughout the years 1950–63 when it was raised to 45 per cent (SLST has paid 60 per cent since 1954 and Delco 50 per cent since 1956). It seems doubtful that this tax could have been or can be raised substantially without discouraging new investment and hence the rate of increase of the tax base. In recent years the tax take has been below what it otherwise would have been because of the tax holidays granted a number of new firms entering the country. However, the expiration of these concessions should result in a rapid increase of revenue from this source. Second, the major bottleneck preventing increased direct tax revenue has been the unwillingness of the government to apply personal income taxes at rates which might generate a substantial flow of revenue. The government allows a personal exemption of £300 for the taxpayer, £200 for his wife, £100 for adult dependents, and £50 for each child (£100 if they are studying abroad). In addition, passage to England for civil servants may be deducted as well as insurance premiums and contributions to pension systems. No tax is paid on the first £200 of chargeable income and the rate begins at 1.4 per cent;[68] the maximum tax level approaches 50 per cent at the £9,600 level. The rate on £3,000 of chargeable income, an amount exceeding the incomes of most civil servants and professors, is only 15 per cent. As a result of the above exemptions and the prevailing low levels of incomes, only 13,000 people filed income tax returns in 1961, which represents less than 0.6 per cent of the total population.[69]

The government has recently taken steps to prevent evasion of the tax by instituting the PAYE system (Pay as You Earn), but even if compliance with the tax law is enforced, its overall effec-

68. Income Tax (Amendment) Act, 1964, para. 10. The rates have been dropped since 1962 when 2.5 per cent was payable starting at £1 chargeable income. In addition a minimum tax is collected starting at £3 on £200 earned income; £100 is due on all income in excess of £2,700 (Due, *Taxation and Economic Development in Tropical Africa*, pp. 38, 42).

69. Due, *Taxation and Economic Development in Tropical Africa*, p. 50. Comparable figures for other African countries are: Rhodesia, 0.9 per cent; Eastern Nigeria, 13 per cent; Ghana, 0.3 per cent; and Kenya, 0.9 per cent.

tiveness has been lessened by the 1964 reduction in the tax rates. Thus, it would appear that the effective tax rates applied to personal income are unduly small, especially when it is considered that administrative costs are incurred regardless of the rates applied.

Finally, many small companies, traders, and professionals have evaded the income tax in the past by failing to keep records. In 1964, in an effort to reduce such evasion, the government adopted a presumptive or turnover tax of 2 per cent on the gross transactions of any enterprise. This tax applies irrespective of profits or losses incurred and must be paid by every one engaging in any trade, business, profession, or vocation. The effect of this tax is that the net demand curve facing the firm is shifted down and to the left. Firms which were formerly marginal profit makers will now be net losers and may be forced out of business unless their costs can be reduced or their demand curve shifted up and to the right. The turnover tax might have been used as a coercive device to force businesses to keep records if it had stipulated that the rate applied only in instances in which business accounts were not available.[70] The tax does introduce a universal minimum tax payment on all businesses, which has some merit where revenue is needed for development purposes; however, the shift in resources resulting from the tax may prove to be detrimental to the long-run growth of the economy. Alternative uses of resources must never be overlooked.

3. *Central Government Expenditure and Its Finance*

The ability of the central government to implement its investment plans and projects is restricted by three primary constraints: (1) the amount of real resources which can be mobilized through measures designed to release resources from either private consumption or investment, (2) the availability of foreign finance and resources, and (3) the amount of resources absorbed by governmental recurrent expenditures. Previous sections of this chapter have concentrated on the first of these constraints, i.e., the

70. In Ghana a 2.5 per cent turnover tax has been in effect since 1961.

extent and development of local capital and money markets, tax revenues, and the nature and design of planning. This section will deal with the allocation of resources made available from these sources and the past and future availability of foreign finance.

Table 31. ***Central government expenditures and finance of expenditures: 1950–1963/64***[a] ***(£ 000)***

	1950	1953	1955	1957	1959/60	1961/62	1962/63	1963/64
Total expenditure	3,799	6,225	7,980	10,893	13,162	18,531	17,696	19,484
Recurrent	2,121	3,929	5,417	7,710	10,160	13,934	14,612	15,910
	(55.8)	(63.1)	(67.9)	(70.8)	(77.2)	(75.2)	(82.6)	(81.7)
Non-recurrent	162	765	690	868	586	(400)	(410)	(400)
	(4.3)	(12.5)	(8.6)	(8.0)	(4.5)	(2.4)	(2.3)	(2.1)
Capital	1,516	1,531	1,873	2,315	2,415	4,157	2,674	3,174
	(39.9)	(24.4)	(23.5)	(21.2)	(20.4)	(22.4)	(15.1)	(16.2)
Finance of non-recurrent and capital expenditure								
Domestic revenue	1,095	1,609	1,516	1,978	380	972	355	750
	(65.3)	(70.1)	(59.1)	(62.1)	(12.7)	(21.1)	(11.2)	(21.0)
Foreign grants	252	301	613	670	756	446	474	0
	(15.0)	(13.1)	(23.9)	(21.0)	(25.2)	(9.7)	(15.4)	
Domestic borrowing	317	393	473	459	1,809	1,459[b]	0	0
	(18.9)	(17.1)	(18.5)	(14.4)	(60.3)	(31.7)		
External borrowing	0	0	0	0	0	1,053	1,556	1,500
						(22.9)	(50.5)	(42.0)
Suppliers' credits	0	0	0	0	0	416	736	1,264
						(9.0)	(23.9)	(35.4)
Residual	14	−7	−39	76	56	211	−37	60

a. Percentage of total expenditures for each figure is given in parentheses below the absolute figure.
b. Listed in accounts as domestic funds (net).
Source: Sierra Leone, Ministry of Finance, *Financial Report*, 1950–64.

The aggregate expenditures of the central government since 1950 and the recurrent, non-recurrent,[71] and capital components of these expenditures are presented in Table 31. The table shows that aggregate governmental expenditures have grown in excess of 11 per cent per annum since 1950 but that the rapid rise of recurrent expenditures has accounted for a major portion of this increase,[72] i.e., recurrent expenditures rose 15 per cent per annum

71. Non-recurrent expenditures are comprised mainly of losses on the operations of the railroad, road transport, electrical works, and post and telecommunications, as well as various surveys instituted by the government.

72. The financial statements for Sierra Leone show that recurrent expenditures have grown more or less proportionally in all major functional categories. Within certain categories such as social services, however, the composition of expenditures has changed. In this particular category educational expenditures now constitute 16 per cent of all recurrent expenditures versus 9 per cent in 1950, and medical services and pensions and gratuities have declined by a corresponding amount (Sierra Leone, Ministry of Finance, *Financial Report*, 1950–64).

over the observed period versus 5 per cent for capital and non-recurrent expenditures. The greatest expenditure increases were concentrated in the fifties when total outlays rose at an average annual rate of 13.2 per cent (for the period 1950–1959/60); and since that period, the annual rate of growth has fallen to about 7 per cent. The rate of growth of capital expenditures, however, has remained relatively constant at about 5 per cent during the two periods, while non-recurrent expenditures have fallen absolutely and the rate of growth of recurrent expenditures has been sharply curtailed. Nevertheless, the growth of recurrent expenditures has still exceeded that of capital outlays, and as a result, the percentage of total expenditures going to capital formation has declined from 40 per cent in 1950 to 16 per cent in 1963/64 while there was a simultaneous increase in recurrent expenditures from 59 per cent to 82 per cent. The amount of funds and resources available for public capital investment, and correspondingly private capital investment, is thus limited not only by the total stock of funds and resources at the disposal of the government, but by the allocation of these funds and resources between capital formation and the operation and administration of previously accumulated capital stock. The success of the government's development programs therefore depends in large part upon its ability to control the growth of recurrent costs, assuming that the major portion of funds must come from domestic sources.[73]

The past impingement of recurrent expenditures on capital formation is further illustrated by examining the sources of finance for public investments (all recurrent expenditure is financed from recurrent revenue). In 1950 the surplus on current account financed 65 per cent of non-recurrent and capital expenditures. The absolute contribution of surplus on current account grew until the late fifties, even though its relative contribution declined slightly. Since 1959/60, however, the absolute contribution of this source of revenue has fallen so that less than 25 per cent of public capital formation is currently financed from this

73. W. F. Stolper has offered the following obiter dictum: "The crucial limitation to a development program comes from recurrent costs and its control is central to development planning" ("External Economies from a Planning Standpoint," *Zeitschrift für die gesamte Staatswissenschaft*, CXIX, April, 1963, 200).

source. At the same time, foreign grants (primarily from the Colonial Development and Welfare program), which contributed about 20 per cent of the finance of capital expenditures between 1950 and 1960, have also declined both absolutely and relatively; and these grants are not expected to regain their former levels.[74] Indeed, they may become entirely displaced by loans as in 1963/64. In order to fill these gaps, the government has resorted to external borrowing and suppliers' credits. Foreign long-term borrowing began in the early sixties and has since accounted for as much as 50 per cent of total public capital formation.[75] Suppliers' credits have also become increasingly important since Independence, and a total of £10.3 million of such agreements have been signed;[76] in 1963/64, 35 per cent of public capital formation came from this source. As a result of these loans and credits, the outstanding external debt of the Sierra Leonean government stood at £14.4 million in January, 1964,[77] and service payments on the debt amounted to £1.25 million. The service payment to export proceeds ratio thus stands at about 8 per cent which appears to be within Sierra Leone's financial capabilities, but it is doubtful whether the current levels of foreign finance in their present form can long continue.[78] The Sierra Leone government

74. *West Africa* recently made the following evaluation of Sierra Leone's possibilities for receiving additional aid from the United Kingdom: "Sierra Leone needs and is asking for greatly increased financial assistance and private investment from the U.K. but, in spite of Mrs. Castle's rejection at the OECD meeting in Paris last week of the idea that Britain's balance of payments difficulties should lead to a cut in 'aid,' and her recent announcement of the Government's intention to grant interest-free loans in select cases, Mr. Bottomley will not be able to hold out much prospect to Sir Albert" ("Mr. Bottomley in West Africa," *West Africa*, July, 1965, pp. 852–853).

75. These loans come primarily from the United Kingdom in the form of Exchequer or Commonwealth Assistance Loans; they now amount to more than £10 million. Loans from SLST (SLST's no-interest, five-year loan of £280,000, due in 1968, is essentially a rebatable tax), Delco, and the Diamond Corporation which amount to £2.3 million are also considered external loans. Many of these loans are as yet undisbursed and are not listed in the tables.

76. Sierra Leone, *A Progress Report*, pp. 86–87. The figures in Table 31 represent payments for work in progress and may thus understate the actual contribution of suppliers' credits to capital formation.

77. Estimate of the Ministry of Finance.

78. Although the limits to the tolerable expansion of foreign credit cannot be ascertained with any degree of certainty, A. Shonfield argues that once this ratio reaches 10–20 per cent, a country will experience difficulty in raising additional loans in international financial centers (*The Attack on World Poverty*, London: Chatto and Windus, 1960, p. 90).

appears to recognize the limitation to further expansion along the present lines in the policy statement:

. . . the level of current external debt charges at about 8 percent of General Revenue (excluding contract finance payments) suggests that further external loans can reasonably be serviced. This position requires qualification. The under-provision for sinking funds, in respect to certain existing loans, together with the burden of contract finance payments, means that external debt servicing charges will increase substantially in the late 1960's and early 1970's. The corrollary [*sic*] to this is that future loans should be long-term involving a low rate of interest, and if possible, with repayments of interest and principal deferred for a number of years. This means that only World Bank/IDA financing, U.N. Special Fund assistance, or bilateral loans on similar terms, are now appropriate to meet Sierra Leone's future needs for external finance.[79]

In other words, the statement implies that unless future external loans are long-term and bear low interest rates, the financing of development expenditures and the accumulation of needed foreign exchange will have to come from some combination of the following sources: (1) greater domestic saving, (2) the rapid expansion of exports, and (3) import substitution. The possibility of stimulating domestic saving has been treated above; the following comments will pertain to the other two alternatives.

Turning first to the expansion of export production, the mining sector of the Sierra Leone economy promises to be the most fruitful source of additional foreign exchange in the immediate future. Iron ore production, as noted in Chapter 4, is expected to double its 1963 production level by 1975; diamond proceeds will probably increase despite the stabilization of production at current or lower levels since the average price received per carat is expected to rise; and bauxite and rutile production may add as much as £2 million to the export revenues of Sierra Leone. Transportation Consultants, Incorporated, estimate that the value

79. Sierra Leone, *A Progress Report*, p. 82. In August, 1964, the World Bank made its first loan to Sierra Leone for the expansion of electrical generating and distributing facilities. The loan of $3.8 million is for a twenty-year period and bears an interest rate of 5 per cent per annum. Amortization will begin in 1967 (International Bank for Reconstruction and Development, *Loan Agreement between IBRD and Sierra Leone Electricity Corporation*, Washington, D.C., August 18, 1964). The loan is guaranteed by the Sierra Leone government.

of mineral production may increase to £36 million in 1978 versus the £22 million of 1963.[80] If these increases are in fact forthcoming and the increased foreign exchange earnings can be used primarily to finance capital imports, the development effort could be substantially aided. Unfortunately, the expansion of the mining sector will probably not be followed by increased proceeds from agricultural exports. The major agricultural exports of Sierra Leone are confronted by world demand schedules which are inelastic with respect to both prices and incomes and with supply schedules which have been shifting outward more rapidly than demand, e.g., cocoa and coffee. For example, FAO estimates that the price elasticity of demand for cocoa (the second largest agricultural export of Sierra Leone) is −0.42 and that the income elasticity of demand in absolute terms is slightly less.[81] As a result of these demand characteristics and the increases in the supply of cocoa resulting from worldwide plantings during the middle and late fifties, the price of cocoa will probably remain near its current level unless exogenous forces alter supply or demand relationships, e.g., the creation of an effective international cocoa agreement, the lowering of tariffs on cocoa in developed countries, or the rapid expansion of sales to Communist countries. In any case and regardless of the commodity in question, it is not clear that increases in the average world price of commodities produced in Sierra Leone would stimulate production, for the relevant demand curves facing producers are not necessarily related to the demand curves confronting Sierra Leone. Producers are only concerned with the infinitely elastic demand curve confronting them after SLPMB establishes its purchase price for the upcoming crop season and with their expectations of future prices. Unless SLPMB passes a portion of any future price increase along to producers, there will be no incentive for the individual producer to increase production; Sierra Leone would receive only the benefit of higher prices for existing levels of production rather than

80. *Transportation Survey of Sierra Leone*, p. 20. The writer is less optimistic than TCI and feels that mining exports will not exceed £30 by 1978.

81. FAO, *Trade in Agricultural Commodities in the United Nations Development Decade* (Rome, 1964), Special Supplement, II, Part 2, 62–63, and Part 4, 190. The price elasticity of demand for coffee is estimated to be −0.34.

higher prices for expanded production. When the processing facilities of SLPMB are completed, export proceeds may be enlarged by some part of the value added now being earned by foreign processors, but these increases may be offset by (1) greater domestic consumption of the products of the processing mills (especially palm kernel oil) and (2) the reduction of resources employed in agricultural export production. The net effects can only be measured after all necessary adjustments have been made.

The remaining alternative source of supplementing foreign exchange earnings involves the substitution of domestic production for goods which are currently imported. It is impossible to note all these possibilities since that would require detailed feasibility studies of individual items, but items from two broad categories have been mentioned previously and will be referred to briefly. The first category involves food items and includes rice, fish, tomatoes, onions, sugar, eggs, meat, and dairy products. These items account for over 70 per cent of the £5 million of food items imported in 1963, and substantial savings in foreign exchange are possible but not immediately likely from this category. In Chapter 2, the attempts to expand rice production were examined and were found to be deficient in their operational results. These deficiencies may be rectified in the distant future, but it is unlikely that self-sufficiency can be quickly obtained. Self-sufficiency has been achieved in egg production, and the marketing of tuna by Van Camp's new factory should reduce fish imports. Yet the onion, cattle, turkey, and pig schemes have all been more or less abandoned at the present time. There is hope that a sugar plantation and processing mill can be established in Sierra Leone and negotiations are currently under way; but even if these plans are successful, the impact of such a program would not be felt for eight to ten years. It is the author's opinion that at best only £1–2 million in foreign exchange can be saved from this category. A second and larger category of goods for which import substitution is possible centers upon consumer non-durable goods and includes such products as rubber sandals, umbrellas, cigarettes, beer, liquor, and cotton wearing apparel. Factories manu-

facturing each of these and other items have been established under the Development Ordinance and may help to alleviate part of the foreign exchange problem. It is interesting to note, however, that in many instances the raw materials necessary for the manufacture of these items must be imported, which reduces the overall contribution of these factories to the balance-of-payments problem. For example, in 1959, £256,000 of unmanufactured tobacco as well as £274,000 of cigarettes were imported. In 1964, after the establishment of a tobacco company in Sierra Leone, £443,000 of unmanufactured tobacco and £161,000 of cigarettes were imported.[82] In other words, cigarettes and unmanufactured tobacco imports were increased £74,000 in 1964 over 1959. While the comparison should be made with the quantity that would have been imported had cigarettes not been produced in Sierra Leone, the example does illustrate that the total saving of foreign exchange through import substitution may not be large if most of the raw materials must be imported.

The paragraphs above thus indicate that some additional foreign exchange can be accumulated in the future from greater exports and/or import substitution. Whether such foreign exchange earnings can be allocated to capital imports or will be diverted toward consumption needs as incomes rise is another matter. Undoubtedly some control by the government over the purchase of foreign exchange would have to be instituted in conjunction with the above measures if the programs are to be a major success. Sierra Leone has not yet moved in this direction, but such proposals are currently under consideration.

In conclusion, the future success of public capital expenditure programs is dependent upon the development of superior techniques of allocating scarce funds among competing projects and programs; the development of a tax system which provides sufficient revenues without simultaneously inhibiting work, saving, or investment incentives; the close scrutiny of recurrent expenditures; and the accumulation of sufficient quantities of foreign exchange. In essence, what is needed is a detailed study of eco-

82. Sierra Leone, *Quarterly Statistical Bulletin,* No. 3 (Sept., 1964), and *Sierra Leone Trade Journal,* 1964/65.

nomic incentives, saving characteristics, approximations of rates of return on various public investments, and the effects of public investment on the types and amounts of private investment. Unless such action is taken promptly, the unco-ordinated "development" programs may actually hinder economic growth.

• 7 •

Summary and Interpretations

In the preceding chapters, an attempt has been made to analyze the economic system of Sierra Leone through detailed examination of its physical and demographic characteristics and by close scrutiny of its major sectors during the past ten to fifteen years. For each sector, both quantitative and qualitative information was marshaled in order to estimate changes within and among the various sectors. In addition, the role of the government in each sector was scrutinized in order to observe how governmental policies and activities impinge upon that sector and in an effort to note the changing role of government in the economic system. Finally, various hypotheses and ideas were put forward and tested either with quantitative data where possible or with qualitative information when sufficient data were lacking. The purpose of the present chapter is to review and summarize the leading ideas of earlier chapters.

The Sierra Leone economy, like most other sub-Saharan economies, is characterized by a relatively large agricultural subsistence sector. The available statistics indicate that nearly 80 per cent of the population derives its primary support from subsistence production and that perhaps as much as 50 per cent of the gross domestic product originates from non-market, economic activities. Although certain pockets of overcropped and degraded land exist, land is relatively plentiful, and the majority of the farmers cultivate extensively small plots of land, using rather crude, primitive agricultural implements and techniques. Soil fertility is maintained, in the absence of suitable animal manure and inexpensive fertilizers, through the practice of shifting cultivation, which is at present the only known means of sustaining soil fertil-

ity over long periods of time. With the gradual improvement in transportation and communication during the twentieth century, the Sierra Leonean farmer has slowly divorced himself from more or less complete reliance upon subsistence production and has turned part of his available time and resources to cash cropping or petty trading. Few farmers specialize solely in the production of cash crops or operate "private" plantations, but almost every farmer has at least limited connections with the market economy.

It is frequently alleged that the farmers of Sierra Leone are not responsive to price changes, but the evidence presented in Chapter 2 indicates that a positive price elasticity of supply for the leading cash crops exists, at least in the long run. Moreover, the evidence presented for palm kernels suggests that the price elasticity of supply is becoming more elastic over time, which reflects the proliferation of economic alternatives and the growing awareness of these alternatives. In conjunction with the increase in the elasticity of supply of palm kernels, it was also observed that a substantial amount of substitution occurs among the leading cash crops, reflecting positive producer reactions to relative price changes and corroborating the generalization stated above concerning the awareness of economic alternatives. If price and quantity estimates for the leading subsistence crops could be included in the estimate for the elasticity of substitution between crops, it seems likely that an even larger elasticity coefficient would have been observed. The results of Chapter 2 are somewhat open to criticism because of the primitive nature of the data and the limited extent of the time series used in certain regressions; nevertheless, the evidence suggests a "strong" relationship between changes in the quantity of cash crops supplied and price movements.

The predominance of agriculture in the economic system of Sierra Leone and the desire of the government to promote economic growth have resulted in certain changes which have greatly affected agricultural production. The most significant change stems from the creation of a statutory export monopoly for agricultural crops. Export crops are no longer funneled through a multitude of private middlemen to private export firms but are

now purchased by licensed agents of SLPMB at prices set by SLPMB. During the past fifteen years, large amounts of revenue have been withheld from producers on the pretext that these funds would later be used to support falling prices. As shown in Chapter 3, actual subsidization of producers' price has occurred on only a limited number of occasions since 1949, and most of the accumulated funds have been used to enhance the power and prestige of SLPMB. The apparent result of SLPMB's pricing policies has been the substitution of subsistence farming for cash cropping and a movement away from agricultural pursuits. In other words, the agency formed by the government to promote agricultural production has caused a movement away from agriculture and a reallocation of resources within the agricultural sector itself. The reallocation of resources is evidenced by the fact that with the exception of cocoa and coffee (which were handled quite differently by the board than were other export crops) the physical output of cash crops has fallen since 1950, while the production of subsistence crops has expanded. SLPMB justifies its pricing policies on the basis that it maintains "model" plantations which indirectly benefit producers and that it is building agricultural processing plants which will augment employment, but the more important considerations of the actual and potential output effects of its taxation policies have never been discussed. In order to appraise the actions of SLPMB, one needs to know how farmers would have used the additional income if surpluses had not been accumulated and what rate of return could have been earned on the investments which might have been made. The evidence presented in Chapter 3 suggests that SLPMB has inhibited agricultural growth and that the industrial undertakings of the board, e.g., the Pioneer Oil Mills, have not provided offsetting gains.

In addition to the establishment of SLPMB, the government has attempted to stimulate agricultural production by introducing mechanical cultivation of rice, swamp clearance, cattleowner settlement schemes, and credit programs. It is difficult to assess the impact of these programs on agricultural production, but it ap-

pears that their aggregate effects have been negligible, due partially to the meager funds which have been allotted the programs, but also partly to the prevailing system of land tenure. Farmers in the provinces of Sierra Leone may not alienate their land and hence cannot obtain credit for financing profitable projects. Some farmers do have recourse to other sources of funds such as credit co-operatives and the Agricultural Loans and Credit Scheme, but the high rates of interest on such loans may preclude many profitable undertakings. Perhaps the most important inhibitor of agricultural growth is the current and past inability of the government or other agencies to disseminate information dealing with improved farming techniques and new crops such as the improved varieties of rice developed at the Rokupr Rice Research Station. It is estimated by agricultural experts in Sierra Leone that output could be doubled without the application of fertilizer. The establishment of agricultural extension centers and the training of extension workers to disseminate this knowledge might prove more profitable in the long run than all the other projects and revisions combined.

Recent pronouncements by the government, however, suggest that the future development of the agricultural sector may not be left in the hands of the individual farmers. SLPMB has already committed itself to the establishment of 440,000 acres of plantations, and the government is currently considering the formation of state farms. These programs have not, in general, been studied in terms of technical feasibility or economic profitability, and judging from past government projects for which feasibility studies have not been made beforehand, e.g., the Pioneer Oil Mills and mechanical cultivation, the prospects for success are somewhat doubtful.

The major structural change which has occurred within the economy of Sierra Leone since World War II has been the rapid emergence of the mining sector. During the period from 1950 to 1963, mining exports grew at an average annual rate of 16 per cent while the absolute value of agricultural exports declined. (Aggregate exports grew at an average annual rate of 10.7 per

cent over the same period.)[1] As a result, mining exports now account for nearly 80 per cent of total exports of Sierra Leone (versus 30 per cent in 1951) and for 20–40 per cent of the gross domestic product, depending on the estimate of GDP used. Diamonds are now the leading export, constituting 76 per cent of the total value of mining exports and 56 per cent of all exports in 1963; iron ore is the next largest export in terms of value, comprising 24 per cent of all mineral exports and 17 per cent of aggregate exports for the same year. The leading agricultural export, palm kernels, accounted for only 8.5 per cent of all exports in 1963, followed by coffee with 2.2 per cent, and cocoa with 2 per cent. The rapid expansion of diamond exports in the period under consideration followed the abrogation of SLST's statutory monopoly right to mine diamonds in 1956 and the legalization of diamond mining by native Sierra Leoneans. These native diggers currently export more diamonds in terms of both carats and value than SLST, but their lower recovery rates and less productive leases, relative to those of SLST, suggest that the output of SLST will again exceed the output of the licensed diggers in the near future. The propitious increase in diamond prices was of equal if not greater importance to the trend of the value of exports than the increased physical production and may provide one of the few growth factors for obtaining foreign exchange in the future. In 1963, the average price received per carat was £12.2, which was more than five times the amount received per carat in 1950. If this rising trend continues (diamond prices have tended to falter only during periods of recession in developed countries), the anticipated decreases in physical output may be more than offset by future price increases, thus providing a

1. Imports grew at a slightly higher rate of 11.2 per cent per year (Sierra Leone, *Trade Report*, 1950–63). End year estimates of import and export growth rates are relatively accurate, but export figures for the intervening years are generally understated because of diamond smuggling. The visible balance of payments shows a deficit for every year from 1950 to 1963 with the exception of 1953 and 1960. Nevertheless, the estimated currency in circulation grew in every year but 1952 despite the fact that the amount of money in circulation was closely linked to the balance of payments through the West African Currency Board. Consequently, estimates of Sierra Leone's balance of payments and holdings of pounds sterling are hazardous before the early sixties, and even estimates for the years since 1960 are not yet available.

possible source of additional foreign exchange.[2] With regard to iron ore exports, over the period from 1950 to 1963 export proceeds have increased nearly fivefold as a result of the expansion of output from 1.3 million tons in 1950 to 1.9 million tons in 1963 and the increase in the average price received per ton from £1.1 to £2.5. Proceeds from the exportation of iron ore should continue to increase during the next fifteen to twenty years (assuming that the price of iron ore does not decrease, since Delco estimates that its annual production will increase to 4 million tons in 1975). In recent years, the price received per ton has been falling gradually and any future declines will adversely affect iron ore export revenues.[3] Unfortunately for Sierra Leone, the price of low-grade iron ore has been falling even more rapidly as many firms have shifted to high-grade ores,[4] and the large deposits of low-grade ore located at Tonkolili may not become economically exploitable for many years.

One notable factor concerning the postwar expansion of iron ore production is that the expansion has been accomplished without an increase in employment. Several hypotheses may be adduced to explain the failure of employment to increase, but it is contended in this work that no explanation of Delco's employment practices can be complete without reference to the wage policies of the Mining Wages Board. Since 1946 this board has increased the wages of mining workers much more rapidly than increases in output per man, and the data suggest that Delco has responded to these wage increases by introducing labor-saving techniques. As a result, employment by Delco is less than it would have been had the board pursued a less aggressive wage policy.

2. The future course of diamond prices is difficult if not impossible to predict. Diamond prices for the major producing countries are determined by the Central Selling Organization (CSO), which stands ready to purchase, within ill-defined limits, all the diamonds of producing countries. The producing country is thus confronted with an elastic demand schedule at the price or prices set by CSO. Trends in world diamond prices are, of course, determined by the price elasticity of supply and demand and the income elasticity of demand for diamonds. Estimates of these elasticities are unavailable to the writer.

3. The United States Bureau of Mines reports increased production from many new sources. These increases may tend to keep iron ore prices at current levels or lower depending on future demand conditions (United States, Department of the Interior Bureau of Mines, Division of Minerals, *Minerals Yearbook, 1962*, I, Washington, D.C.: Government Printing Office, 1964, pp. 654–673).

4. *Ibid.*, p. 673.

The manufacturing sector of the Sierra Leone economy currently employs less than 10 per cent of all workers hired by firms employing six or more people and appears to account for less than 10 per cent of gross domestic product. The government is actively attempting to encourage industrial expansion through the establishment of tax holidays for new or expanding firms, the creation of an industrial estate, the advancement of loans to new industries, and the issuance of non-nationalization policy statements. At this point, the influence of these promotional activities on private investment decisions cannot be estimated with any degree of precision. It is therefore suggested that these policies have tended primarily to maintain rather than enhance Sierra Leone's competitive position for attracting new firms. This conclusion is supported by the fact that the majority of the new firms locating in Sierra Leone since 1960 are consumer goods industries, indicating that their establishment may be more related to the growth of internal markets than to any other causal factor. In fact, several of the development firms were investigating investment prospects in Sierra Leone before the enactment of the Development Ordinance. Expatriates own most of the new industries and older commercial establishments in Sierra Leone. The failure of native Sierra Leoneans to enter these fields may denote either a lack of entrepreneurial ability or a lack of sufficient investment funds. The multitude of petty traders and hawkers suggests that the latter factor may be more important.

One additional factor constraining the development of manufacturing in Sierra Leone is the limited size of the relevant markets. Many items such as tires and electric appliances cannot be profitably produced for small markets. This constraint might be reduced if a regional free-trade area could be established, and several such proposals are under discussion.[5] These proposals, however, are primarily political in nature rather than economic since less than 2 per cent of Sierra Leone's aggregate external

5. Sierra Leone and Guinea concluded a most-favored-nation trade agreement in late 1964, but the effect of this treaty is likely to be negligible since the total trade between the two countries has amounted to less than £20,000 in recent years. Talks are also under way to establish a free-trade area for Sierra Leone, Liberia, the Ivory Coast, and Guinea, but again trade between these countries is negligible (see Sierra Leone *Trade Reports* for recent years).

trade involved its African neighbors in 1963,[6] which points out the lack of complementarities among the bordering states. The West African countries produce the same basic foodstuffs, export similar crops and raw materials, and import manufactured items and foodstuffs in return. In short, there appear to be few relevant complementarities which could be jointly used to foster economic growth. The merits of establishing larger markets through free-trade areas, of linking transportation and communication networks, and even of amalgamating political bodies in order to reduce governmental overhead costs cannot be denied. But greater, sustained economic growth can only be obtained after large amounts of both physical and human capital have been accumulated and after social, cultural, and political conditions have been altered sufficiently to permit larger amounts of capital to work efficiently within new environments. The previous chapters indicate that these more elaborate conditions have not yet been fulfilled in Sierra Leone and that the obstacles to the growth and development of the Sierra Leonean economy will not be quickly overcome. Unless large amounts of foreign capital become available to Sierra Leone, the future prospects for this economy are rather bleak.

In addition to the attempts to promote economic growth discussed above, the government has sought to mobilize resources through development planning and fiscal and monetary policies. Development planning as currently practiced in Sierra Leone is an ill-conceived, *ad hoc* capital expenditure program lacking operational significance. No machinery exists for assessing the present economic position of the country or for designing programs which might achieve specified goals. The present plan contains few or no investment criteria, and such aggregate constraints as the availability of manpower, foreign exchange, and domestic resources have not been integrated into the plan. In short, planning in Sierra Leone is employed essentially as a device for attracting foreign funds and not as a specific allocation instrument.

In regard to monetary and fiscal policy, the government has created a central bank empowered with all the orthodox instru-

6. Sierra Leone, *Trade Report*, 1963, p. 186.

ments. Yet the bank is constrained in its use of these instruments by two factors: (1) the existing commercial banks function primarily as branch banks for large metropolitan banks and thus do not use the Bank of Sierra Leone as a lender of last resort and (2) neither money nor capital markets exist, so that open market operations are infeasible. The Bank of Sierra Leone may aid the development of a local money market by designing attractive issues of bills and securities, but at present, the establishment of the bank appears to be primarily a symbol of the break with the colonial regime rather than an economic measure. Finally, the ability of the government to finance development expenditures out of tax revenues is constrained by the rapid growth of recurrent expenditures during the past ten to fifteen years. In recent years, less than 25 per cent of capital expenditures has been financed from recurrent revenue (as much as 60 per cent of capital expenditures was financed from this source in the early fifties), and unless this source of revenue is augmented by increased personal income taxes or other forms of direct taxation, the contribution of recurrent revenue to capital expenditures may decline even further. As a result of the decline in this domestic source of revenue, the government has been forced to borrow from foreign sources. As indicated in the preceding chapter, these loans have now reached such proportions that additional loans (and hence capital imports) can only be accepted if any or all of the following conditions are met: (1) if loans are long term and bear low interest rates, (2) if exports can be quickly expanded, and (3) if domestic production of certain imported goods can be achieved with sufficient rapidity.

Finally, during the immediate post-World War II period, the government played a negligible role in the operation of the Sierra Leonean economy. During the past twenty years, however, the government has penetrated into almost every sphere of economic activity: prices of many agricultural and manufactured goods are controlled by the government, wages for most workers employed for wages are set by governmental institutions, foreigners have been banned from certain retail and manufacturing activities, and the government is entering into the actual production of goods

and services. Despite these governmental interventions, a large area still exists in which individual enterprise may be pursued. But the existing opportunity for individual enterprise will undoubtedly be reduced in the near future when the government assumes an even greater economic role in an effort to promote social and economic development. Yet one has the uncomfortable feeling that the costs of such interventions will far outweigh the benefits to the aggregate economy.

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